THE LANCET.

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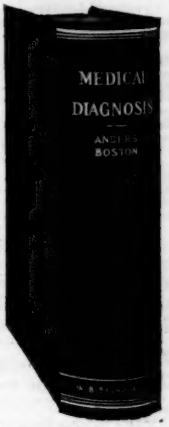

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ABSTRACT OF

A Presidential Address

ON

HEREDITY.

Delivered in Melbourne on August 14th, 1914, before the Meeting of the British Association for the Advancement of Science.

BY WILLIAM BATESON, M.A., F.R.S.,
PRESIDENT OF THE ASSOCIATION.

GENTLEMEN,—I shall attempt to give the essence of the discoveries made by Mendelian or analytical methods of study and ask you to contemplate the deductions which these physiological facts suggest in application both to evolutionary theory at large and to the special case of the natural history of human society. Recognition of the significance of heredity is modern. The term itself in its scientific sense is no older than Herbert Spencer. Animals and plants are formed as pieces of living material split from the body of the parent organisms. Their powers and faculties are fixed in their physiological origin. They are the consequence of a genetic process, and yet it is only lately that this genetic process has become the subject of systematic research and experiment. The curiosity of naturalists has of course always been attracted to such problems; but that accurate knowledge of genetics is of paramount importance in any attempt to understand the nature of living things has only been realised quite lately even by naturalists, and with casual exceptions the laity still know nothing of the matter. Historians debate the past of the human species, and statesmen order its present or profess to guide its future as if the animal man, the unit of their calculations, with his vast diversity of powers, were a homogeneous material which can be multiplied like shot.

The reason for this neglect lies in ignorance and misunderstanding of the nature of variation; for not until the fact of congenital diversity is grasped, with all that it imports, does knowledge of the system of hereditary transmission stand out as a primary necessity in the construction of any theory of evolution, or any scheme of human polity.

The first full perception of the significance of variation we owe to Darwin. The present generation of evolutionists realises perhaps more fully than did the scientific world in the last century that the theory of evolution had occupied the thoughts of many and found acceptance with not a few before ever the "Origin" appeared. We have come also to the conviction that the principle of natural selection cannot have been the chief factor in delimiting the species of animals and plants, such as we now with fuller knowledge see them actually to be. We are even more sceptical as to the validity of that appeal to changes in the conditions of life as direct causes of modification, upon which latterly at all events Darwin laid much emphasis. But that he was the first to provide a body of fact demonstrating the variability of living things, whatever be its causation, can never be questioned.

[Professor Bateson, having premised that formerly it was hoped that by the simple inspection of embryological processes the modes of heredity might be ascertained and the actual mechanism by which the offspring is formed from the body of the parent be arrived at, then said that so long as no one can show consistent distinctions between the cytological characters of somatic tissues in the same individual, distinctions between the chromosomes of the various types cannot be perceived. Hence, for the old methods of attack, he said, there has been substituted the breaking up of the main problem into its parts, such analytical study being called Mendelian because Mendel was the first to apply it. He pointed out that misconception was especially brought in by describing descent in terms of blood, truer notions of genetic physiology being given by the Hebrew expression "seed."]

THE FACTORS IN THE TRANSMISSION OF CHARACTERISTICS.

The allotment of characteristics among offspring is not accomplished by the exudation of drops of a tincture representing the sum of the characteristics of the parent organism, but by a process of *cell-division*, in which numbers of these characters, or rather the elements upon which they depend, are sorted out among the resulting germ cells in an orderly fashion. What these elements, or *factors* as we call them, are we do not know. That they are in some way directly transmitted by the material of the ovum and of the spermatozoon is obvious, but it seems to me unlikely that they are in any simple or literal sense material particles. I suspect rather that their properties depend on some phenomenon of arrangement. However that may be, analytical breeding proves that it is according to the distribution of these genetic factors, to use a non-committal term, that the characters of the offspring are decided. The first business of experimental genetics is to determine their number and interactions, and then to make an analysis of the various types of life. The ordinary genealogical trees, such as those which the stud-books provide in the case of the domestic animals, or the Heralds' College provides in the case of man, tell nothing of all this. Such methods of depicting descent cannot even show the one thing they are devised to show—purity of "blood." For at last we know the physiological meaning of that expression. An organism is pure-bred when it has been formed by the union in fertilisation of two germ cells which are alike in the factors they bear; and since the factors for the several characteristics are independent of each other, this question of purity must be separately considered for each of them. A man, for example, may be pure-bred in respect of his musical ability and cross-bred in respect of the colour of his eyes or the shape of his mouth. Though we know nothing of the essential nature of these factors, we know a good deal of their powers. They may confer height, colour, shape, instincts, powers both of mind and body; indeed, so many of the attributes which animals and plants possess that we feel justified in the expectation that with continued analysis they will be proved to be responsible for most if not all of the differences by which the varying individuals of any species are distinguished from each other.

[Professor Bateson then summarised the main features of the work that has been done to show that the great differences which characterise distinct species are due generally to such independent factors, the essential principle being that an organism cannot pass on to its offspring a factor which it has not itself received in fertilisation. He proceeded:]

Parents which are both destitute of a given factor can only produce offspring equally

destitute of it, and parents both pure-bred for the presence of a factor produce offspring equally pure-bred for its presence. Whereas the germ cells of the pure-bred are all alike, those of the cross-bred, owing to the union of dissimilar germ cells, are mixed in character. Each positive factor segregates from its negative opposite, so that some germ cells carry the factor and some do not. Once the factors have been identified by their effects the average composition of the several kinds of families formed from the various matings can be predicted. The body of evidence accumulated by this method of analysis is indeed very large, and progress is beginning along many novel and curious lines.

THE DOCTRINE OF SURVIVAL OF THE FITTEST.

In face of what we now know of the distribution of variability in nature the scope claimed for natural selection in determining the fixity of species must be greatly reduced. The doctrine of the survival of the fittest is undeniable so long as it is applied to the organism as a whole, but to attempt by this principle to find value in all definiteness of parts and functions, and in the name of science to see fitness everywhere is mere eighteenth century optimism. Yet it was in application to the parts, to the details of specific difference, to the spots on the peacock's tail, to the colouring of an orchid flower, and hosts of such examples, that the potency of natural selection was urged with the strongest emphasis. Shorn of these pretensions the doctrine of the survival of favoured races is a truism, helping scarcely at all to account for the diversity of species. Tolerance plays almost as considerable a part. By these admissions almost the last shred of that teleological fustian with which Victorian philosophy loved to clothe the theory of evolution is destroyed. Those who would proclaim that whatever is is right will be wise henceforth to base this faith frankly on the impregnable rock of superstition and to abstain from direct appeals to natural fact.

My predecessor said last year that in physics the age is one of rapid progress and profound scepticism. In at least as high a degree this is true of biology, and as a chief characteristic of modern evolutionary thought we must confess also to a deep but irksome humility in presence of great vital problems. Every theory of evolution must be such as to accord with the facts of physics and chemistry, a primary necessity to which our predecessors paid small heed. For them the unknown was a rich mine of possibilities on which they could freely draw. For us it is rather an impenetrable mountain out of which the truth can be chipped in rare and isolated fragments. Of the physics and chemistry of life we know next to nothing. Somehow the characters of living things are bound up in properties of colloids, and are largely determined by the chemical powers of enzymes, but the study of these classes of matter has only just begun. Living things are found by a simple experiment to have powers undreamt of, and who knows what may be behind?

THE PROBLEM OF VARIATION.

Naturally we turn aside from generalities. It is no time to discuss the origin of the mollusca or of dicotyledons, while we are not even sure how it came to pass that Primula obconica has in 25 years produced its abundant new forms almost under our eyes. Knowledge of heredity has so reacted on our conceptions of variation that very competent men are even denying that variation in the old sense is a genuine occurrence at all. Variation is postulated as the basis of all evolutionary change. Do we then as a matter of fact find in the world about us variations occurring of such a kind as to warrant faith in a contemporary progressive evolution? Till lately most of us would have said "Yes" without misgiving. We should have pointed, as Darwin did, to the immense range of diversity seen in many wild species, so commonly that the difficulty is to define the types themselves. Still more conclusive seemed the profusion of forms in the various domesticated animals and plants, most of them incapable of existing even for a generation in the wild state, and therefore fixed unquestionably by human selection. These, at least, for certain, are new forms, often distinct enough to pass for species, which have arisen by variation. But when analysis is applied to this mass of variation the matter wears a different aspect. Closely examined, what is the "variability" of wild species? What is the natural fact which is denoted by the statement that a given species exhibits much variation? Generally one of two things: either that the individuals collected in one locality differ among themselves; or perhaps more often that samples from separate localities differ from each other. As direct evidence of variation it is clearly to the first of these phenomena that we must have recourse—the heterogeneity of a population breeding together in one area. This heterogeneity may be in any degree, ranging from slight differences that systematists would disregard to a complex variability such as we find in some moths, where there is an abundance of varieties so distinct that many would be classified as specific forms but for the fact that all are freely breeding together. Naturalists formerly supposed that any of these varieties might be bred from any of the others. Just as the reader of novels is prepared to find that any kind of parents might have any kind of children in the course of the story, so was the evolutionist ready to believe that any pair of moths might produce any of the varieties included in the species. Genetic analysis has disposed of all these mistakes. We have no longer the smallest doubt that in all these examples the varieties stand in a regular descending order, and that they are simply terms in a series of combinations of factors separately transmitted, of which each may be present or absent.

The appearance of contemporary variability proves to be an illusion. Variation from step to step in the series must occur either by the addition or by the loss of a factor. Now, of the origin of new forms *by loss* there seems to me to be fairly clear evidence, but of the *contemporary acquisition* of any new factor I see no satisfactory proof, though I admit there are rare examples which may be so interpreted. We are left with a picture of variation utterly different from that which we saw at first. Variation now stands out as a definite physiological event. We have done with the notion that Darwin came latterly to favour, that large differences can arise by accumulation of small differences. Such small differences are often mere ephemeral effects of conditions of life, and as such are not transmissible; but even small differences, when truly genetic, are factorial like the larger ones, and there is not the slightest reason for supposing that they are capable of summation. As to the origin or source of these positive separable factors, we are without any indication or surmise. By their effects we know them to be definite, as definite, say, as the organisms which produce

diseases; but how they arise and how they come to take part in the composition of the living creature so that when present they are treated in cell-division as constituents of the germs we cannot conjecture.

THE PART PLAYED BY CROSS-BREEDING.

[Professor Bateson then reviewed the evidence for disbelieving in the common theory that domestic animals have been developed from a few wild types. He showed that it was hopeless to reconstruct the steps in evolution of various forms of fowls from the Indian jungle fowl, while most of the new varieties of cultivated plants are, he said, the outcome of deliberate crossing, for we have full histories of these crosses in gladiolus, orchids, cineraria, begonia, calceolaria, and pelargonium. The single origins presumed for dogs, horses, cattle, sheep, poultry, wheat, oats, rice, plums, and cherries have in turn failed to stand investigation, the distinctions between the chief varieties being traceable as far back as evidence reaches.] Once it is known, he said, that the supposed intergrades are merely mongrels between the two species, the transition from one to the other is practically beyond our powers of imagination. If both these can survive, why has their common parent perished? Why when they cross do not they reconstruct it instead of producing partially sterile hybrids? When once the idea of a true-breeding—or, as we say, homozygous—type is grasped, the problem of variation becomes an insistent oppression. What can make such a type vary? We know, of course, one way by which novelty can be introduced—by crossing. Cross two well-marked varieties—for instance, of Chinese primula—each breeding true, and in the second generation by mere recombination of the various factors which the two parental types severally introduced, there will be a profusion of forms, utterly unlike each other, distinct also from the original parents. Many of these can be bred true, and if found wild would certainly be described as good species. Confronted by the difficulty I have put before you, and contemplating such amazing polymorphism in the second generation from a cross in antirrhinum, Lotsy has lately with great courage suggested to us that all variation may be due to such crossing. I do not disguise my sympathy with this effort. After the blind complacency of conventional evolutionists it is refreshing to meet so frank an acknowledgment of the hardness of the problem. Lotsy's utterance will at least do something to expose the artificiality of systematic zoology and botany. Whatever might or might not be revealed by experimental breeding, it is certain that without such tests we are merely guessing when we profess to distinguish specific limits and to declare that this is a species and that a variety. The only definable unit in classification is the homozygous form which breeds true. When we presume to say that such and such differences are trivial and such others valid, we are commonly embarking on a course for which there is no physiological warrant. Who could have foreseen that the apple and the pear—so like each other that their botanical differences are evasive—could not be crossed together, though species of antirrhinum so totally unlike each other as *majus* and *molle* can be hybridised, as Baur has shown, without a sign of impaired fertility? Jordan was perfectly right. The true-breeding forms which he distinguished in such multitudes are real entities, though the great systematists, dispensing with such laborious analysis, have pooled them into arbitrary Linnæan species, for the convenience of collectors and for the simplification of catalogues. Such pragmatical considerations may mean much in the museum, but with them the student of the physiology of variation has nothing to do. These "little species," finely cut, true-breeding, and innumerable mongrels between them, are what he finds when he examines any so-called variable type. On analysis the semblance of variability disappears, and the illusion is shown to be due to segregation and recombination of series of factors on pre-determined lines. As soon as the "little species" are separated out they are found to be fixed. In face of such a result we may well ask with Lotsy, Is there such a thing as spontaneous variation anywhere? His answer is that there is not.

VARIATION BY LOSS OF FACTOR.

Abandoning the attempt to show that positive factors can be added to the original stock, we have further to confess that we cannot often actually prove variation by loss of factor to be a real phenomenon. Lotsy doubts whether even this phenomenon occurs. The sole source of variation, in his view, is crossing. But here I think he is on unsafe ground. When a well-established variety like "Crimson King" primula, bred by Messrs. Sutton in thousands of individuals, gives off, as it did a few years since, a salmon-coloured variety, "Coral King," we might claim this as a genuine example of variation by loss. The new variety is a simple recessive. It differs from "Crimson King" only in one respect, the loss of a single colour-factor, and, of course, breeds true from its origin. To account for the appearance of such a new form by any process of crossing is exceedingly difficult. From the nature of the case there can have been no cross since "Crimson King" was established, and hence the salmon must have been concealed as a recessive from the first origin of that variety, even when it was represented by very few individuals, probably only by a single one. Surely, if any of these had been heterozygous for salmon this recessive could hardly have failed to appear during the process of self-fertilisation by which the stock would be multiplied, even though that selfing may not have been strictly carried out. Examples like this seem to me practically conclusive. They can be challenged, but not, I think, successfully. Then, again, in regard to those variations in number and division of parts which we call meristic, the reference of these to original cross-breeding is surely barred by the circumstances in which they often occur. There remain also the rare examples mentioned already in which a single wild origin may with much confidence be assumed. In spite of repeated trials, no one has yet succeeded in crossing the sweet pea with any other leguminous species. We know that early in its cultivated history it produced at least two marked varieties which I can only conceive of as spontaneously arising, though, no doubt, the profusion of forms we now have was made by the crossing of those original varieties. I mention the sweet pea thus prominently for another reason—that it introduces us to another though subsidiary form of variation, which may be described as a *fractionation* of factors. Some of my Mendelian colleagues have spoken of genetic factors as permanent and indestructible. Relative permanence in a sense they have, for they commonly come out unchanged after segregation. But I am satisfied

that they may occasionally undergo a quantitative disintegration, with the consequence that varieties are produced intermediate between the integral varieties from which they were derived. These disintegrated conditions I have spoken of as subtraction—or reduction—stages. For example, the picotee sweet pea, with its purple edges, can surely be nothing but a condition produced by the factor which ordinarily makes the fully purple flower, quantitatively diminished. The pied animal, such as the Dutch rabbit, must similarly be regarded as the result of partial defect of the chromogen from which the pigment is formed, or conceivably of the factor which effects its oxidation. On such lines I think we may with great confidence interpret all these intergrading forms which breed true and are not produced by factorial interference.

THE COURSE OF EVOLUTION.

[Professor Bateson then inferred that these fractional degradations are the consequence of irregularities in segregation, and gave evidence of departures from normal regularity in the rhythms of repetition or waves of differentiation by which qualities are sorted out among parts of the body. He said that he felt no reasonable doubt that though we may have to forego a plan of variations by addition of factors, variation both by loss of factors and fractionation of factors is a genuine phenomenon of contemporary nature. If we have to dispense, as seems likely, with any addition from without, we must begin seriously to consider whether the course of evolution can at all reasonably be represented as an unpacking of an original complex which contains within itself the whole range of diversity which living things present." He propounded no theory of evolution, but pointed out that, as we have got to recognise that there has been an evolution and that somehow or other the forms of life have arisen from fewer forms, we may as well see whether we are limited to the old view that evolutionary progress is from the simple to the complex, and whether after all it is conceivable that the process was the other way about.]

We have to reverse our habitual modes of thought. At first it may seem rank absurdity to suppose that the primordial form or forms of protoplasm could have contained complexity enough to produce the divers types of life. But is it easier to imagine that these powers could have been conveyed by extrinsic additions? Of what nature could these additions be? Additions of material cannot surely be in question. We are told that salts of iron in the soil may turn a pink hydrangea blue. The iron cannot be passed on to the next generation. How can the iron multiply itself? The power to assimilate the iron is all that can be transmitted. A disease-producing organism like the pebrine of silkworms can in a very few cases be passed on through the germ cells. Such an organism can multiply and can produce its characteristic effects in the next generation. But it does not become part of the invaded host, and we cannot conceive it taking part in the geometrically ordered processes of segregation. These illustrations may seem too gross; but what refinement will meet the requirements of the problem, that the thing introduced must be, as the living organism itself is, capable of multiplication and of subordinating itself in a definite system of segregation? That which is conferred in variation must rather itself be a change, not of material, but of arrangement, or of motion. The invocation of additions extrinsic to the organism does not seriously help us to imagine how the power to change can be conferred, and if it proves that hope in that direction must be abandoned I think we lose very little. By the re-arrangement of a very moderate number of things we soon reach a number of possibilities practically infinite.

"RELEASES" OF POWERS NORMALLY SUPPRESSED.

That primordial life may have been of small dimensions need not disturb us. Quantity is of no account in these considerations. Shakespeare once existed as a speck of protoplasm not so big as a small pin's head. To this nothing was added that would not equally well have served to build up a baboon or a rat. Let us consider how far we can get by the process of removal of what we call "epistatic" factors—in other words, those that control, mask, or suppress underlying powers and faculties. I have spoken of the vast range of colours exhibited by modern sweet peas. There is no question that these have been derived from the one wild bi-colour form by a process of successive removals. When the vast range of form, size, and flavour to be found among the cultivated apples is considered, it seems difficult to suppose that all this variety is hidden in the wild crab-apple. I cannot positively assert that this is so, but I think all familiar with Mendelian analysis would agree with me that it is probable, and that the wild crab contains presumably inhibiting elements which the cultivated kinds have lost. The legend that the seedlings of cultivated apples become crabs is often repeated. After many inquiries among the raisers of apple seedlings I have never found an authentic case—once only even an alleged case—and this on inquiry proved to be unfounded. I have confidence that the artistic gifts of mankind will prove to be due, not to something added to the make-up of an ordinary man, but to the absence of factors which in the normal person inhibit the development of these gifts. They are almost beyond doubt to be looked upon as *releases* of powers normally suppressed. The instrument is there, but it is "stopped down." The scents of flowers or fruits, the finely repeated divisions that give its quality to the wool of the merino, or in an analogous case the multiplicity of quills to the tail of the fantail pigeon, are in all probability other examples of such releases. You may ask what guides us in the discrimination of the positive factors and how we can satisfy ourselves that the appearance of a quality is due to loss. It must be conceded that in these determinations we have as yet recourse only to the effects of dominance. When the tall pea is crossed with the dwarf, since the offspring is tall we say that the tall parent passed a factor into the cross-bred which makes it tall. The pure tall parent had two doses of this factor, the dwarf had none; and since the cross-bred is tall we say that one dose of the dominant tallness is enough to give the full height. The reasoning seems unanswerable. But the commoner result of crossing is the production of a form intermediate between the two pure parental types. In such examples we see clearly enough that the full parental characteristics can only appear when they are homozygous—formed from similar germ-cells, and that one dose is insufficient to produce either effect fully. When this is so we can never be sure which side is positive and which negative. Since, then, when dominance is incomplete we find ourselves in this difficulty, we perceive that the amount of the effect is our only criterion in distinguishing the positive from the negative, and when we return even to the example of the tall and

dwarf peas the matter is not so certain as it seemed.

[Professor Bateson here quoted Cockerill's experiments with sunflowers, where among thousands of yellow flowers one occurred partly red, by breeding from which a form wholly red was raised, and asked if we could not interpret other apparent new dominants in the same way. The white dominant in the fowl or in the Chinese primula can inhibit colour. He asked, May it not be that the original fowl or primula had two doses of a factor which inhibited this inhibitor? In 1840 the pepper moth produced a black variety now common in certain areas and behaving as a full dominant. The pure blacks are no blacker than the cross-bred. Though at first sight it seems that the black must have been something added, we can without absurdity suggest that the normal is the term in which two doses of inhibitor are present, and that in the absence of one of them the black appears.]

SUMMARY OF DEDUCTIONS.

In spite of seeming perversity, therefore, we have to admit that there is no evolutionary change which in the present state of our knowledge we can positively declare to be not due to loss. When this has been conceded it is natural to ask whether the removal of inhibiting factors may not be invoked in alleviation of the necessity which has driven students of the domestic breeds to refer their diversities to multiple origins. Something, no doubt, is to be hoped for in that direction, but not until much better and more extensive knowledge of what variation by loss may effect in the living body can we have any real assurance that this difficulty has been obviated. We should be greatly helped by some indication as to whether the origin of life has been single or multiple. As the evidence stands at present, all that can be safely added in amplification of the evolutionary creed may be summed up in the statement that variation occurs as a definite event often producing a sensibly discontinuous result; that the succession of varieties comes to pass by the elevation and establishment of sporadic groups of individuals owing their origin to such isolated events; and that the change which we see as a nascent variation is often, perhaps always, one of loss. Modern research lends not the smallest encouragement or sanction to the view that gradual evolution occurs by the transformation of masses of individuals, though that fancy has fixed itself on popular imagination. The isolated events to which variation is due are evidently changes in the germinal tissues, probably in the manner in which they divide. It is likely that the occurrence of these variations is wholly irregular, and as to their causation we are absolutely without surmise or even plausible speculation. Distinct types once arisen, no doubt a profusion of the forms called species have been derived from them by simple crossing and subsequent recombination. New species may be now in course of creation by this means, but the limits of the process are obviously narrow. On the other hand, we see no changes in progress around us in the contemporary world which we can imagine likely to culminate in the evolution of forms distinct in the larger sense. By intercrossing dogs, jackals, and wolves new forms of these types can be made, some of which may be species, but I see no reason to think that from such material a fox could be bred in indefinite time, or that dogs could be bred from foxes.

Whether science will hereafter discover that certain groups can by peculiarities in their genetic physiology be declared to have a prerogative quality justifying their recognition as species in the old sense, and that the differences of others are of such a subordinate degree that they may in contrast be termed varieties, further genetic research alone can show. I myself anticipate that such a discovery will be made, but I cannot defend the opinion with positive conviction.

Somewhat reluctantly and rather from a sense of duty, I have devoted most of this address to the evolutionary aspects of genetic research. We cannot keep these things out of our heads, though sometimes we wish we could. The outcome, as you will have seen, is negative, destroying much that till lately passed for gospel. Destruction may be useful, but it is a low kind of work. We are just about where Boyle was in the seventeenth century. We can dispose of alchemy, but we cannot make more than a quasi-chemistry. We are awaiting our Priestley and our Mendeléeff. In truth, it is not these wider aspects of genetics that are at present our chief concern. They will come in their time. The great advances of science are made like those of evolution, not by imperceptible mass-improvement, but by the sporadic birth of penetrative genius. The journeymen follow after him, widening and clearing up, as we are doing along the track that Mendel found.

CONGENITAL ATRESIA OF THE POST-NASAL ORIFICE.[1]

BY CHARLES W. RICHARDSON, M.D.

THE occurrence of congenital obstruction to the post-nasal orifice is described by many writers as a very infrequent form of nasal deformity, but when we consider the number of cases reported one cannot but be impressed with the relative frequency of this type of nasal obstruction. Indeed, it seems to me to be one of the most frequent types of congenital malformation in the nasal chambers. To be sure, seldom does it become the fortune of a rhinologist to see more than one example of this type of malformation, and many with large experience have never seen a single case. One must also consider the possibility that many cases of this kind of deformity have been in the past, and even at the present time are unrecognised at birth as such, and when speedily dying, as a result of the obstruction to respiration, are placed under the general class of asphyxia neonatorum. If all cases of asphyxia neonatorum were properly differentiated, as they probably will be in the future, we will probably find that this form of deformity is responsible for no small proportion of these cases. As many observers have noted, the number of observed cases in children and adults has increased greatly during the past 20 years, largely due to the increased number of intelligent workers in rhinology, the more exact and thorough examination of patients, and from the knowledge more widely diffused that such a deformity may occur. The number of cases observed in the newly born has not increased in the same proportion as the cases observed later in life. I believe that this is due to the fact that the general practitioner and the obstetrician under whose observation the infants are first brought

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have not been sufficiently led into our confidence and taught to be on the look out for choanal obstruction when the new-born infant manifests evidences of impaired or difficult respiration. Indeed, it behoves us to be teachers as well as observers. One specialty becomes so intent upon its own line of work that it only now and then feels the touch of other specialties and the frequent interdependence of one upon the others. It is interesting to observe that this form of deformity apparently affects the female sex more frequently than the male. The relative frequency of the bilateral to the unilateral is in the proportion of 3 to 1.

Congenital atresia is that form of obstruction of the post-nasal orifice that takes place in utero, the result of a misplacement or other malformation in the embryo, not in any way due to inflammatory reaction or pressure, and usually characterised by a more or less complete partition, obstructing one or both post-nasal orifices. This obstructing partition is usually complete in the choana affected, although occasionally there may be one or more minute openings by which a communication is found through the nose to the post-nasal cavity. Several cases are mentioned wherein the obstructing partition was incomplete, only the upper portion of the choanæ being closed, the obstructing partition's lower border being concaved downward, as noted in cases reported by Hopmann and Kahler. The partition is usually formed by a thin plate of bone; occasionally mixed, largely formed of bone and being completed by membrane; and infrequently being entirely membranous. In only one case, that reported by Onodi, does cartilage seem to have entered partially in the formation of the partition. The partition, when formed by an osseous plate, is usually lined on its nasal facies by the characteristic mucous membrane of the nasal cavity, and on its pharyngeal surface by the mucous membrane which is common to this cavity. The histological examination, as made by Hochheim, is as follows: "In structure it [the bone] corresponded to the hard palate. It consisted as the hard palate of a centrally placed plate of bone, which on the one surface was lined with muco-periosteum corresponding to that of the nasal cavity, and on the other of the muco-periosteum corresponding to the post-nasal cavity modified in the respect that in this are found mucous glands, and the epithelia are columnar instead of flat epithelia." The plate, when osseous, is more or less vertically placed, with a concavity looking towards the pharyngeal cavity; thicker in its outer portion, and presenting a more or less slight groove on its pharyngeal surface, which is internal to the middle line and near unto its attachment to the vomerian border. The osseous partitions are usually contiguous with the line of the posterior borders of the horizontal and vertical plate of the palate bone, and attached internally to the vomer and above to the body of the sphenoid so as to be placed a millimetre or more within the free border of the vomer. The membranous partitions proceed from the upper surface of the soft palate upward and slightly backward to the roof of the pharynx.

It hardly seems necessary at this day when so many undoubted cases of congenital choanal obstruction have been reported to defend the possibility of such a condition existing or defending the position that the greater majority of cases, discovered many years after birth, are of congenital origin. There is no possibility of doubt. In the first place we have the observation made on fœtuses, both in the human and animals. To Otto (1830) belongs the honour of having first described the occurrence of an osseous post-nasal obstruction in a human fœtus. We have also the interesting case reported by Luschka (1858) in a stillborn female child; the 7-months-old fœtus reported by Bitot (1876); and the miscarriage reported by Gross (1875) of a membranous closure of the choana. We have also the undoubted cases observed at birth in living normal children—Ronaldson (1881), Solis-Cohen (1879), Texier (1906), Malcolm Mackey (1908), and Richardson (1913). Added to these, we have three cases observed shortly after birth: Eduard Richter (1901), 6-weeks-old child, unilateral; Brunk (1909), 11 weeks old; and Göz (1913), 3 months old when brought under observation.

In considering the pathogenesis of the congenital occlusion of the posterior nares we have several views to consider, no one of which can we unconditionally accept. Not until we have sufficient post-mortem material upon which thorough and painstaking dissections are made can this question be thoroughly and scientifically adjusted. From a theoretical point of view one would be inclined to accept each one as probably explaining a certain proportion of the various types of deformity which are manifested.

1. Luschka considers the obstructing plate to be a projection upward and backward of the horizontal plate of the palate bone. He states: "In this case the bony framework was formed by the palate bones on both sides. The posterior, free, and concave border of the horizontal plate was continued in a somewhat oblique direction upward and backward to the lower surface of the body of the sphenoid bone, being attached to the latter by a serrated edge. Latterly, the bony plate reached the under side of the lamina interna of the pterygoid process. In the median line the lamella joined its fellow of the other side at the point where the posterior nasal spine usually rises, while the two, in their further progress upwards, were separated by a narrow slit, into which the lower extremity of the rudimentary vomer had penetrated."

2. The Kundrat theory that the obstruction is due to an extension inward of the vertical plates of the palate bones. According to this view, the vertical plates of the palate extend inward until they reach the inner wall of the choanal orifice, and, when occurring bilaterally, they unite with their fellow of the opposite side, the vomer being received between the two plates.

3. According to Hopmann, the choanal obstruction is an extreme degree of the occasionally observed choanal asymmetry. The narrow groove which is often seen on the posterior surface of the diaphragm is the remaining evidence of the originally existing post-nasal orifice. The infant which I had under observation, and upon whom I operated with complete relief when it was 15 months old, seemed, through post-nasal examination, as well as from the showing at operation, to have this pathogenesis. On digital exploration of the post-nasal cavity, its anterior surface, the nasal, seemed perfectly plain. There was not the slightest indentation to indicate the existence of the choanal orifices, nor was there the slightest elevation in the middle line to indicate the posterior free border of the vomer. In using the chisel in opening up the cavity we found the chisel penetrated along the

septum nearly half a centimetre before it entered into the pharyngeal cavity.

4. The opinion advanced by Bitot that the plate forming the partition is a separate, independent bone, as indicated by the separate sutures evidenced therein.

When we consider the embryology of the nose we note certain factors that may aid us in the probable conclusion as to the method of the occurrence of this form of deformity. Before the end of the third week of intra-uterine life the olfactory plates appear as localised thickenings of the ectoderm. With the rapid outgrowth of the surrounding tissue the nasal pits are formed by the depression of the olfactory plates. Projecting downward and forward from the ventral wall of the primary forebrain vesicle we have the naso-frontal process, a localised thickening of mesodermic tissue, which subsequently enters into the formation of the septum narium. During the fifth week the lateral margins of the naso-frontal process thicken greatly and thus form the globular processes. At the same time we have budding out upon the naso-frontal processes the lateral nasal processes, one on each side, which, growing downward, form the external boundary of each nasal pit. Thus each nasal pit is bounded on its inner border by the globular process and its outer wall by the lateral nasal process. We find at this period that the nasal pit has a well-defined border, except below, where it is directly continuous with the buccal cavity. About the sixth week the coalescing of the naso-frontal process, the united maxillary, and lateral nasal process results in the division between the oral fossa and the nasal pits, thus forming, though yet crudely, the external nose and upper lip. The orifices of the nasal pits form the anterior nares, the nasal pits themselves forming a narrow canal which opens into the primitive mouth cavity above the palatal shelves. The naso-frontal process, which is still very broad, subsequently becomes narrow, and that portion which separates the nares enters into the formation of the septum. Extending from the inner surface of the maxillary process, two new processes, the palatine shelves, extend inward toward each other and, coalescing, form the palate. At the time of the development of the nose the primitive oral cavity is separated from the gut-tract by the "pharyngeal membrane," the *rachen-haut*. At some time during the fourth week this membrane is absorbed, thus bringing the oral cavity into communication with the upper end of the gut-tract. It is difficult to determine the exact location of the pharyngeal membrane with the adult pharynx; it is certain, however, that the primitive mouth includes, besides the adult buccal cavity, the anterior part of the adult pharynx. Such being the case, how possible it is that the absorption of the pharyngeal membrane may be so delayed in a certain proportion of cases until the separation of the nasal from the primitive oral cavity has transpired, when thereafter only that portion of the pharyngeal membrane is absorbed which corresponds to the oral cavity, while that which corresponds to the anterior pharyngeal wall remains unabsorbed. It is also possible that embryonal activity at the juncture of the various processes that enter into the formation of the nasal chambers may result in over-production of tissue, which results in the closure of the choanal orifice.

There are only two classifications to congenital choanal obstruction which seem worthy of consideration, one made by E. Kayser and the other by Schwendt. That given by Kayser seems to be more scientific than the one made by Schwendt. Kayser divides the deformity into three groups. 1. Intranasal atresia of the choanæ. In this group are included all those cases which are formed of a thin plate of bone, bone and membrane, or membrane which lie within the nasal cavity within a millimetre or so from the free border of the choanæ, either unilateral or bilateral, and which from a post-rhinoscopic view show the free border of the choanæ and the vomer. 2. Marginal atresia of the choanæ. In this form we have those cases in which there is a union of the choanal border or the union of the palate bone with the vomer. 3. Extranasal or retronasal atresia of the choanæ. This includes all of those cases without the nasal cavities, practically in the naso-pharynx, although immediately behind the choanæ. This class takes care of the purely membranous type, first described by O. Chiari, and whence Schwendt maintains its congenital origin from the fact that they contain, besides connective tissue, muscular fibres. Schwendt divides post-nasal obstructions into two classes: (1) The typical, under which are grouped practically all those cases which are described by Kayser as intranasal; and (2) the atypical, which includes all other manifestations of choanal obstruction of congenital nature. The Schwendt classifications seem to be most acceptable to the Germans, and are adhered to by Kahler, Haag, and others.

Symptoms of congenital choanal obstruction may be divided into those as manifested in the new-born child and those existing in patients observed first at later periods in life.

In the new-born child with bilateral obstruction the all-pervading symptom is the abolition of nasal breathing, with the train of symptoms produced thereby. Mouth breathing is an acquired habit. The infant at birth will suffocate unless it voluntarily acquires or is taught the function of breathing through the mouth when the nasal cavities are rigidly and continuously obstructed. The infant, not being able to breathe through the nose, becomes rapidly cyanosed until the discomfort is so great as to cause it to cry when the air hunger is relieved through the momentarily-established mouth-breathing, and the thus threatening asphyxia is relieved. As the relief comes through mouth-breathing the child ceases to cry, and there are a few seconds of quietude, when the desire for air again becomes rapidly great, the lips are drawn tight and cheeks drawn in, and then a struggle results, as is usually manifested by one who is suffering greatly for the want of air, the face becoming more and more cyanosed, when the child again breaks out with a lusty cry, which relieves again the threatening asphyxia through mouth-inhaling of air. There is a constant repetition of this cycle, unless constant relief through mouth-breathing is brought about by slightly depressing the lower jaw and maintaining an opening between the lips for continuous mouth-breathing. The struggle for breath is so great as to make it impossible for the infant to take the breast or bottle, which makes the nourishing of the infant a serious problem. The nasal cavities are filled by a thick, gelatinous, clear mucus. The normal status of the lower air tract is demonstrated by the speedy relief of symptoms through mouth-breathing. Kayser states that the infant is more comfortable when not in a recumbent position, but such was not the case with the infant which was under my observation. Post-digital exploration in a new-born infant is practically impossible. Irrigation of the nasal cavity

with an eye dropper will demonstrate that no fluid passes into the pharynx, but returns through the anterior nares as the chamber becomes filled with the fluid. Sounding with the probe will demonstrate the existence of the obstruction, its position and nature.

In older children and adults with congenital choanal obstruction the absence of nasal respiration is the pronounced symptom. In bilateral obstruction this is complete; in unilateral obstruction incomplete and limited to the side affected. In bilateral obstruction a history is given of infantile difficulty in breathing, difficulty in respiration, and the great difficulty in maintaining nutrition in infancy on account of the inability to take the breast or suck from a bottle, the infant usually being brought up through the medium of the spoon.

The obstructed nasal chamber is always filled with a thick albuminous mucus. This condition is so generally remarked by all observers that it might be stated as a constant evidence of choanal obstruction. Kahler states that this form of secretion he has never seen in any other form of nasal disease. Indeed, when the obstruction is unilateral the patient is hardly conscious of the condition, especially when young, but the parents are greatly annoyed by this outflow of nasal secretion. Eczema of the alæ and upper lip is often caused thereby. On account of the inability of the tears to pass into the pharynx they also flow out of the anterior nares during crying. The secretion within the nasal chamber must either be mopped out or removed through syringing. From obstruction to the expiration through the nose the effort at sneezing is impossible. Where complete obstruction exists there is absolute loss of the sense of smell; when unilateral, this function is only impaired in the side obstructed. It is interesting to note that many operators refer to the restoration of the sense of smell immediately after the opening of the nasal chamber. The correlated sense of taste is not always in complete abeyance; many observers state that the sense of taste is fairly maintained in bilateral and frequently not altered in unilateral obstruction. More or less involvement of the middle ear is noted, although a number of cases have been observed in which there was no involvement of the auditory apparatus. The moderately separated lips are quite as characteristic of this condition as of the other condition with obstruction to nasal respiration. The alteration of the voice is another very characteristic symptom. The voice is nasal in character and presents the usual peculiarity common to nasal obstructions, however produced. Like unto other forms of nasal obstruction, it is more marked in its alteration in some patients than in others.

The facial appearance does not show the changes which are usually manifested so markedly in other forms of nasal obstruction. The naso-labial folds are not pronouncedly drawn, nor is the mouth widely agap. Several observers have noted asymmetry of the face, but this is not a constant factor in unilateral choanal obstruction. Thirteen observations of want of symmetry have been noted in 100 cases. Haag contends that the unilateral nasal breathing does not produce asymmetry of the face, and avers that as such an asymmetry occurred in only a few cases of unilateral nasal obstruction, and as there occurred unilateral asymmetry in one of his cases with bilateral obstruction, the asymmetry does not ensue as a result of the unilateral obstruction, but as a result of the same fœtal condition that produced the choanal deformity.

The alteration of the plane of the hard palate is so infrequently indicated by writers as to render it impossible for us to give any definite conclusion with regard to this deformity's influence upon the normal plane of the hard palate. Haag was the first to make accurate measurements to show the relative position of the hard palate in cases of congenital post-nasal obstruction to the normal standard. Since his observation attention has been more definitely drawn to the influence of this deformity on the arching of the hard palate, and it is to be hoped that through this means some definite idea with regard to the influence of mouth-breathing upon the abnormal high arching of the palate may be obtained. According to Haag, in the 68 cases which he gathered from the literature, in only 21 was there any mention of the form of the hard palate. In 15 cases the arching of the palate was high; in the other six it was normal. All three of Haag's cases show abnormally high, or V-shaped, hard palates. Kahler and Johann Lang have also made accurate measurements, but few others of the observers since Haag's able exposition of the form of the hard palate in connexion with this deformity have more than mentioned the fact as to its form. In all of Kahler's nine cases was there noted an abnormally high-arched palate, one of which was bilateral and the others unilateral. Johann Lang's six cases presented high-arched palates, three of which appeared in Professor Kaufman's clinic and three under his own observation. The consideration of this subject naturally brings up the controversy of the influence of the mouth-breathing on the formation of the hard palate. It is unnecessary to enter nearer into the discussion than to state that, so far as can be seen, there is nothing further developed in this rather academic dispute than a demonstration that, up to the present writing, there is apparently insufficient proof to support either the views of Waldow-Koerner, Ziem, Siebenman, or Hopmann. We have all noted high-arched palates with broad faces in nasal obstruction (chamæprosop) and high-arched palates without nasal obstruction in long-faced individuals (leptoprosop), and the reverse of this condition. There is no doubt that nasal obstruction and the formation of the face have both an influence on the development of the hard palate. In all the cases of congenital bilateral obstruction seen at birth, wherein the form of the hard palate is mentioned, Ronaldson and Texier, it was noted to be normal, and such was the condition in the case which was under my observation. These cases would seem to lend weight to the contention that any alteration in the form of the hard palate, if such were to take place, must occur after birth and be influenced to a certain degree by the method of breathing.

Examination reveals usually a widening of the nasal chambers. In unilateral cases the septum is frequently, not always, deflected towards the obstructed side. The nasal mucous membrane is sodden, paler than normal, and moderately atrophic. As would be expected in a mucosa constantly bathed in secretions, so do we observe frequently a polypoid formation, and more particularly sessilated and pedunculated hypertrophies of the inferior turbinates. As Kayser states, a true atrophic rhinitis has never been noted as occurring in this condition, excepting,

possibly, the case mentioned by Kahler as occurring in a partial unilateral obstruction.

In infants the tendency to develop marasmus through deficiency, or inability to maintain nutrition, is very great. In older children and adults there are practically no general symptoms of moment that can be directly traceable to the deformity. It is singular how asthma is practically an unmentioned symptom. Difficult respiration is always manifested, more marked in the bilateral than in the unilateral cases, under stress of physical effort. Unilateral sweating has been noted by several observers. This condition must be differentiated from adenoids, syphilitic rhinitis with adhesion, simple inflammatory adhesion, foreign bodies, retropharyngeal tumours, retropharyngeal abscess, and intranasal tumours.

It is interesting to note that Johann Lang attempts to prove the hereditary nature of this disturbance without any facts to substantiate his contention. Most writers refer to the absence of heredity directly, and others in an indirect way. Lang saw several cases in the one family, and went so far as to include a deceased child, whom he had never seen, and, from this one occurrence, deduced the hereditary nature of the deformity.

The diagnosis of this condition is not attended with any difficulty if one only had the thought of the disturbance in mind. In infants we have the difficult breathing, the cyanosis with threatened asphyxia, the characteristic struggling child with tightly drawn lips and indrawn cheeks, relieved, at last, from its impending suffocation by a crying spell; the constant repetition of this cycle. The older child and adult give the history of not breathing through the nose, unilateral or bilateral, since birth; the extreme difficulty of rearing the child on account of the problem of feeding. The excessive and annoying thick, clear, albuminous-like mucus secretion is almost pathognomonic of congenital post-nasal obstruction. In infants and adults the impermeability of the post-nasal cavities from the nasal chambers can be readily demonstrated by gently douching through the anterior nares. Then by palpating with a probe through the anterior nares do we not only localise the seat of the obstruction, but also its probable character.

The hard, firm resistancy of bone can readily be differentiated from the soft, less resistant sensation imparted by the soft tissue. Indeed, through even the mucous membrane covered bone can, by palpation, a distinct click be heard, even recognised by the patient. Through anterior and posterior rhinoscopy, post-nasal digital exploration and transillumination, we obtain additional information as to the condition of the nasal chambers; the location of the obstruction; the character and presence of secretion; the appearance of both surface of the obstruction and its probable thickness; its relation to the post-nasal orifice and the vomer edge; the appearance of the post-nasal cavity; and the sensation imparted by the location, position, attachment, and touch of the obstruction. It is to be advisedly borne in mind that digital exploration in newborn infants can not be resorted to with the expectation of obtaining any information from the procedure.

The prognosis in the older child, who has passed through the suckling period, is extremely favourable as to the probable result of operative intervention.

The prognosis of the new-born child is distinctly a problem of life or death. The important problem which presents itself here is as to whether it is better to attempt expectant treatment or resort to an immediate operation. Through the expectant treatment we aim for the establishment of artificial mouth-breathing and the proper nutrition of the infant who is unable to take nourishment in the normal manner. Expectant treatment should never be attempted unless the parents are intelligent, willing to make the sacrifice of time, effort, and want of rest, and have a sufficient number of intelligent, painstaking assistants. The infant must also be a well-nourished, strong, and healthy child From its birth, or as soon thereafter as its condition is properly diagnosed, the infant should not be allowed to have any attacks of asphyxiation, nor even the slightest want of air, except when feeding, and even then with care this may be avoided. This is accomplished by constantly holding the lower jaw slightly depressed by pressing slightly on the chin. This procedure requires some one quite alert to be constantly with the infant.

The feeding must be resorted to through the medium of a spoon. It is remarkable how quickly the child learns voluntarily to establish mouth-breathing within ten days, and also learns to suck from a bottle within three weeks. Should rapid loss of weight or other evidences of inanition be manifested the operative procedure should immediately be instituted. In favour of the expectant treatment is the possibility of establishing artificial mouth-breathing and nutrition with intelligent care, as was so perfectly demonstrated in my case. The number of cases of bilateral obstruction first discovered in childhood or adult life also demonstrated the fact that a number pass through the suckling period even without the intelligent attention which could only come through appreciation of the condition that exists. Also as favourable to the expectant treatment must we consider the danger of operation through shock and fever to a new-born infant and the possible complications. Also one must take into consideration the small size of the naso-pharynx; the softness of the post-nasal tissue; the difference between their conformation as we are most accustomed to find them later in life; the inability to use the index finger in the post-nasal cavity as a guide; the danger of injuring adjacent important structures in the actual operation; and the possible great difficulty in maintaining the good result of the operation on account of the smallness of the cavities and the tender age of the patient. The factors in favour of the operation, should it be successful, are the immediate relief to the sufferer, its ability to breathe and take nourishment normally almost immediately thereafter, and the great pleasure to the parents. Indeed, it is impossible to judge, in a general way, the best course to pursue with regard to the little ones; much discretion and good judgment in considering the individual case are essential in coming to a conclusion as to the best course to pursue. Should operative intervention be delayed and the progress of the infant satisfactory, the period of election for the operation is to be considered. Other things being equal, that period should be selected when the pharynx is sufficiently well developed to permit of easy manipulation with the guiding finger in the naso-pharynx. The naso-pharynx is usually sufficiently well developed to permit of easy finger manipulation

about the ninth month of life; the operation, therefore, should be done as soon after this period as practicable.

In the older child and adults, as in the infant, the only procedure that offers any relief is operative intervention. To Emmert belongs the honour of first operating on a case of congenital nasal obstruction (1854). Various operative procedures have been suggested and done for the relief of this deformity. In a general way that procedure is best which is accompanied by the least injury and accomplishes the result most thoroughly. Borders should be given as widely separated and as smooth as possible so as to offer the least tendency to the development of excessive granulation. It is far better to conduct the operation under general anæsthesia. The use of reflected light is also advisable. Voltoline, Schroeter, and others have used the galvano-cautery. Emmert and others have resorted to the use of the curved trocar. T. B. Wilkinson invented an ingenious revolving trocar, worked by hand, with which he bored through the obstruction. Trephines and various types of drills driven by electro-motors have also been used for this purpose. The chisel to penetrate the plate along the line of attachment of the vomer and the various forms of conchotomes to remove the remaining portion of the obstructing plate seem to me the ideal methods of dealing with the condition under consideration. This procedure should be done with the finger in the naso-pharynx as a protector and guide. The method of operative procedure suggested by Uffenorde seems to be ideal. In this operation the muco-periosteum is raised on the septum down to the obstructing plate, from whose anterior surface it is gradually separated until its outer border of attachment is reached. The flap is then thrown well outward and the bone plate is removed by chisels and conchotomes. After the bone partition is thoroughly removed, the flap is replaced, and an incision is made vertically through the middle of the muco-periosteal flap which covered the nasal surface of the obstructing plate. Expanding forceps are now introduced and the redundant muco-periosteal flap is made to co-apt and cover the whole margin of the bone wound. A light packing maintained for 24 hours is sufficient to insure complete union. The danger of hæmorrhage is not very great if due care be exercised in performing the operation. Most operators refer to the moderate hæmorrhage which occurred in doing the operation. The after-treatment may or may not be tedious, according to whether there is sufficient space gained to prevent the tendency to closure of the artificial opening made and whether there is an active tendency to the development of exuberant granulations. Moderate packing has to be maintained for a few days and thereafter the careful watching of the case and the resorting to those methods necessary to prevent the recurrence of the closure and repress excessive granulation.

Washington, D.C., U.S.A.

METROPOLITAN ASYLUMS BOARD: INSTRUCTION IN HOSPITAL ADMINISTRATION.—A three months' course of lectures and demonstrations in hospital administration will be given at the North-Western Hospital by Dr. J. MacCombie, and at Grove Hospital by Dr. J. E. Beggs on Mondays and Thursdays at 5 P.M., beginning Monday, Oct. 5th. Medical men desiring to attend should apply to the clerk to the Metropolitan Asylums Board, Embankment, E.C.

PREGNANCY COMPLICATED BY SEVERE MORBUS CORDIS:

TWO CASES TREATED BY HYSTEROTOMY UNDER SPINAL ANÆSTHESIA.

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THESE two cases are recorded in order to supplement the cases published by Dr. J. D. Barris in the Proceedings of the Royal Society of Medicine, April, 1914. The histories are as follows:—

CASE 1.—The patient, a primigravida, aged 21, was seen in consultation on March 10th, 1911. She was four months pregnant, and had two years previously had a severe attack of rheumatic fever, subsequent to which she developed a mitral stenosis. She had been very unwell since the sixth week of pregnancy. There had been very severe vomiting, coupled with dyspnœa and œdema. She had been kept at rest and treated by the usual cardiac tonics, but reaction had been unsatisfactory. When I saw her she was very cyanosed and dyspnœic, her pulse was 124 and irregular, with the galloping rhythm characteristic of marked failure of compensation. Her temperature was 101·6° F. Examination revealed a normal four months pregnant uterus. The heart was markedly dilated, weak irregular sounds with no definite murmur to be heard, but a very definite thrill over the whole præcordium. There were moist sounds over both lungs, and the base on either side was dull as far as the angle of the scapula. There was no sign of free fluid in the abdomen, but the back and the legs as far as the knees were œdematous. As the patient was in a desperate state, had not responded to medical treatment, and was further handicapped in her fight for life by the continued vomiting, it was at once decided to empty the uterus, and as her general condition precluded any inhalation anæsthesia it was thought that the spinal method should be adopted. Accordingly, using Barker's heavy solution of stovaine, I produced anæsthesia in this way and emptied the uterus by vaginal hysterotomy. The operation was easy of accomplishment and was carried out fairly rapidly without the patient showing any sign of shock. The bleeding was but trifling; indeed, having regard to the condition of the patient's right heart I could have wished for more. Unfortunately, the œdema of the lungs progressed and she died the next day. No necropsy was obtained.

CASE 2.—The patient, a 5-gravida, was sent by Mr. A. E. Tughan to me at the Tottenham Hospital. She had had attacks of failure of compensation with the last three pregnancies, and extremely trying confinements, and came up in the fifth month of the present pregnancy in a condition of marked severity. The face was cyanosed, breathing was only comfortable when she was sitting up, and she had a distressing cough. The pulse was 118, weak and irregular; temperature 97·6° F. The apex beat was in the seventh space four and a half inches from the mid-sternum, and the heart's sounds were weak and flapping in character. There was no murmur. She was transferred to Queen Charlotte's Hospital, where she improved rapidly under the care of Dr. R. D. Maxwell. During the next three and a half months she was three times admitted in the same condition but improved under treatment. A week before term she came to see me again in a very distressing condition. The

symptoms of cardiac failure were all very marked, and she was again sent to Queen Charlotte's, where, by the kindness of my colleague Dr. T. G. Stevens I was allowed to continue the management of the case. The question of treatment was not very easy to settle, but I decided upon Cæsarean section under spinal anæsthesia for the following reasons: (1) Cæsarean section was the quickest method of delivery and the one which would throw least strain upon her already enfeebled heart; (2) sterilisation could be carried out and further risks of child-bearing avoided; and (3) as her cardiac condition seemed to be one of general myocardial degeneration a general anæsthetic was to my mind absolutely contra-indicated. This was carried out on March 10th, 1914, Mr. Kenneth Lees very kindly carrying out the anæsthesia for me. A preliminary injection of morphia gr. 1/4, atropine gr. 1/150, and hyoscine gr. 1/150 seemed to have removed all apprehension from the patient's mind, and she stood the operation extremely well. Sterilisation was to have been effected by excising an inch of the tubes and turning in the ends between the layers of the broad ligament, but this caused very profuse hæmorrhage on the right side, so that the tube and ovary were removed. The left side was treated as intended. The patient got up on the fourteenth day, and left hospital on the twentieth with her baby, both in good health.

In this latter case the decision was difficult, the alternative procedure being the induction of labour and the instrumental delivery as soon as practicable. This method would still have left her liable to future pregnancies with their attendant risks, and had sterilisation been carried out at a later date another operation would have been necessary. Personally, I feel strongly that these patients with marked cardiac lesions should not be allowed to incur the risks of repeated pregnancies, as increasing experience has convinced me that though the immediate danger is not excessive their expectation of life is materially shortened by the strain of repeated pregnancies. In the combination of spinal anæsthesia and hysterotomy, vaginal up to the twenty-fourth week, abdominal at a later date, I feel we have a method of treatment for these cases which is both rapid and efficient, and at least worthy of consideration.

Wimpole-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON ADRENALIN CHLORIDE IN THE TREATMENT OF SPASMODIC ASTHMA.

BY HAROLD W. L. WALLER, M.B., CH.B. LIVERP.

THE following notes may be useful as supplementing Dr. W. Miller's experiences with adrenalin, as related in THE LANCET of July 18th (p. 158). I have employed hypodermic injections of adrenalin chloride in cases of spasmodic asthma for the last five years, having been led to adopt the treatment by the perusal of an article in an American medical journal. The preparation used has been Parke, Davis, and Co.'s solution of 1 in 1000, with 0·5 per cent. chloretone, in doses of 5 or 6 minims to begin with, never more, and these doses have never been followed by any untoward consequences; on the contrary, the relief to the patient has invariably been prompt, grateful, and in many instances lasting. The American writer of the above-mentioned article put forward as an additional recommendation the fact that in using adrenalin in this complaint smaller and smaller doses would be found efficacious, instead of increasingly larger administrations as might be expected. This statement has been fully supported in my experience, and even such a minute dose as 1 minim diluted with water has been successful in promptly cutting short an attack in a chronic case.

During the last five years I have had the opportunity of closely observing the effect of the drug hypodermically administered to a chronic asthmatic, a professional gentleman 40 years of age. Until adrenalin was tried in the spasm nothing gave him relief, even morphia itself proving unsatisfactory. The benefit obtained by him is invariably immediate, although I can confirm Dr. Miller's observations as to the patient's pallor and the smallness, rapidity, and slight irregularity of the pulse for a few minutes immediately after the injection. The patient's own description of his sensations is that he feels "a little cold and inclined to shiver, somewhat shaky in the knees, and a peculiar empty feeling in the chest." These soon pass off, and the dominant sensations then are a delightful sense of relief from the dyspnœa and a desire for sleep. The sleep is always light, refreshing, and dreamless, and I have never known it followed by undesirable or unpleasant consequences. This patient has been free of his ailment for weeks and months at a time. Occasionally during a bout I have had to give him two injections in the 24 hours, but I have always been able to decrease the dose, and have never given him more than 6 minims or less than 2. It is now more than six months since he has had the slightest return of his trouble, or has received or required an injection.

I am aware that the continuous administration of large doses of suprarenal extract is followed in animals by arterio-sclerotic changes; but the amount of the gland extract injected in the above doses being so infinitesimal this objection cannot, I think, be urged against its employment in asthma. I have always injected the preparation subcutaneously, never intravenously, and I have never found that any benefit was to be obtained by even quite large doses given by the mouth.

Bakewell.

A CASE OF SURGICAL EMPHYSEMA COMPLICATING LABOUR.

BY EDWARD SMEED, M.R.C.S. ENG., L.R.C.P. LOND.,
RESIDENT MEDICAL OFFICER, QUEEN CHARLOTTE'S HOSPITAL.

THE following case is of some interest owing to its rarity.

The patient, a primipara, aged 22, was admitted in the first stage of labour to this hospital on June 17th, 1914, under the care of Dr. A. F. Stabb. The position of the child was left occipito-anterior and the measurements of the pelvis were normal. Two hours after the commencement of the second stage of labour, during which the pains had been strong and frequent, it was noticed that there was an increasing œdema of the right side of the neck and face; this was so marked around the eye that the patient was unable to see; there was also commencing œdema on the opposite side of the face. The œdema on palpation gave the typical eggshell crackling. Chloroform was at once administered, and the head being on the perineum the patient was delivered by means of pressure on the fundus. Till

the patient was fully anæsthetised the œdema continued to increase on both sides. After delivery the œdema was found to extend over the entire length of the sternum and to pass upwards over both clavicles to the tissues of the neck and face. During convalescence in the hospital the œdema rapidly diminished, and on departure 12 days later nothing abnormal could be detected. There was no history of tubercle in the patient's family or past history, and there was never any evidence of pneumothorax.

Sir Francis H. Champneys[1] states that the emphysema in these cases is due to rupture of an air vesicle on the anterior surface of the root of the ung, the air escaping under the pleura into the anterior mediastinum, and then up beneath the cervical fascia to the neck and chest. In this case the rupture of the vesicle must have been due to the vigorous straining efforts of the patient during the second stage of labour, although the baby was of average size, weighing 7¼ lb. I am indebted to the courtesy of Dr. Stabb for permission to publish this case.

Reviews and Notices of Books.

Manuel Pratique de Diagnostic Bactériologique et de Technique Appliqués à la Détermination des Bactéries.

Par R. LE BLAYE, Ancien Interne des Hôpitaux de Paris, Professeur Suppléant et Chef des Travaux de Bactériologie à l'Ecole de Médecine de Poitiers, et H. GUGGENHEIM, Ancien Interne des Hôpitaux de Paris. Paris: Vigot Frères. 1914. Pp. 444. Price 8 francs.

THIRTY years ago (1885) Eisenberg's "Bakteriologische Diagnostik" made its appearance. This was the first attempt to tabulate the then described bacteria according to their morphology and chief cultural characters, in such a manner that by a process of elimination a newly isolated bacterium could be tracked down, and if not absolutely identified, at least referred to a group of obviously closely related species. Seventeen years later Matzuschita published under a similar title a detailed catalogue of more than 1300 known species of bacteria (reviewed in THE LANCET, 1902, vol. ii., p. 936), to which was appended a synoptical key, which served a similar purpose. From both these works, though the details they supplied were scanty, past generations of students of bacteriology have obtained much assistance. But in the last decade vast strides have been made, new methods of investigation have been introduced, and a large number of facts, particularly those relating to the biochemistry of bacteria, have accumulated, by the help of which closely allied micro-organisms have been differentiated and the processes of identification of bacteria, though perhaps rendered more laborious, have certainly become more exact and reliable.

The present authors, premising that the recognition and identification of an organism, when isolated, may present difficulties, even to the expert bacteriologist—a self-evident truth that none will gainsay—and may be next to impossible to the tyro, have endeavoured to fill the gap in bacteriological literature left vacant by the superannuation of the two volumes previously mentioned, and have compiled a series of analytical tables, which cannot fail to be of service to the working bacteriologist, and which we trust will go far to prevent the multiplication of synonyms by the rediscovery of previously described bacteria.

The general plan of the book is simple and logical. In the introductory section the authors discuss the scheme of study upon which bacteriological differentiation should be based, and here they rightly emphasise the pleomorphism of bacteria under varying conditions of environment, and dictate those observations calculated to yield the data essential for identification. In the second part, they detail the technique to be followed in accumulating such data, the media to be employed, and the method of their preparation, the methods of isolation and of staining, the study of the metabolic products formed during the growth of bacteria in artificial culture, the methods of animal inoculation and the diagnostic value of the results obtained, and the study of specific antibodies.

In the third part, which forms the *raison d'être* of the work, is set out a series of eight tables (A–H) similar to those employed in analytical chemistry for the identification of an unknown salt, in which bacteria are grouped under the broad general heading of facultative and obligate anaerobes, and under such suitable sub-divisions as are rendered possible by the existence or absence of liquefying ferments for agar and gelatine, and the possession or otherwise of chromogenetic powers. Following on this preliminary sorting out the student is referred to one or more of the further 67 tables in which the groups are minutely analysed until individual bacteria are arrived at. The fourth part forms a caustic comment on careless or imperfect descriptions, as it consists of the names of no less than 400 bacteria "incompletely described," arranged in ten lists or groups, of which it is safe to say not one of the cocci or bacilli could be recognised, when next encountered, from the few attributes that were considered sufficient by those who originally isolated and recorded them. Last of all comes an exhaustive bibliographical index of some 60 odd pages, giving the names of all the species included in the tables and the original reference for each—a most valuable piece of compilation.

There is little fault to be found with the book as a whole. The precise critic may complain that the directions for making media are too meagre and do not permit of that accurate standardisation which is the aim of every modern bacteriologist, and occasionally we find ourselves disagreeing with some diagnostic character of minor importance, as, for example, when M. catarrhalis and M. melitensis are stated in the final table to grow feebly, or not at all, on gelatine at 20°–22° C. But we feel sure that these diagnostic tables will receive a warm welcome from workers, particularly those whose facilities for access to bacteriological literature are limited.

Historical Sketches of Old Charing.

By JAMES GALLOWAY, A.M., M.D. Aberd. London: John Bale, Sons, and Danielsson, Limited. 1914. Pp. 82. Price 10*s.* 6*d.* net.

Historical Account of Charing Cross Hospital and Medical School.

By WILLIAM HUNTER, M.D. Edin., F.R.S. Edin. London: John Murray. 1914. Pp. 309. Price 21*s.*

THE two volumes before us are both written by physicians to Charing Cross Hospital, and cover a period of time extending over some 700 years. From about the year 1229, when Henry III. confirmed the gift of William, Earl of Pembroke, of

[1] THE LANCET, Nov. 15th, 1884, p. 871.

"all his houses at Cherring" to the Brethren of Roncesvalles, until 1544, when the greed of Henry VIII. despoiled the house and ravished the poor, there existed a body of men at Charing who cared for the said poor and gave them such medical treatment as the knowledge of the times permitted. In 1821 arose the present Charing Cross Hospital, carrying on the long and honourable mediæval tradition.

Dr. Galloway has reprinted his interesting account of the chapel and hospital of St. Mary Roncesvalles, which was originally published in 1907. The chapel and hospital were a cell of the great mother house of St. Mary Roncesvalles in Navarre, of which Charlemagne was the practical founder. The house served many interests, for not only were there military brethren who kept the pass from Pamplona to Bordeaux against the Moors, but there were also non-military *confrères*, who ministered with prayers and alms; and in addition there was a hospital for the sick and for weary wayfarers, with a staff including physicians, surgeons, an apothecary, and sisters. The English branch house came to possess property in various districts of England, Ireland, and Scotland, and it flourished with varying fortunes until the spoliation under Henry VIII. The site was on the ground of what was in later years Northumberland House, and is now more or less Northumberland-avenue. A landmark in the history of the hospital was the year 1290, when the body of Eleanor of Castille rested in Charing on its way to Westminster, and this fact gives Dr. Galloway occasion for supplementing his account of the hospital with a further account of the beloved Queen, the progress of her body, and the various monuments erected to her memory. Illustrations are given of the crosses still standing.

Years passed, and the hospital of St. Mary Roncesvalles was only a memory in men's minds. But in the year 1818 a medical man, Dr. Benjamin Golding, born at St. Osyth in 1793, and educated at St. Thomas's Hospital, 1813–1817, formulated a scheme for a hospital which should not only be a place for the care and treatment of the sick, but also a centre of medical education in the widest sense. In addition to the ordinary pupils a certain number of "young gentlemen of respectable but unfortunate families" were to be given "free access to every branch of instruction conferred without remuneration by the directors and other teachers." It is this provision for education which marks Charing Cross Hospital from its foundation as unique among the hospitals of London, a point upon which Dr. Hunter rightly lays much stress. In Dr. Golding's own words, "The want of a university, so far as medical education is concerned, will be fully supplied, and the branches of instruction in which those places are defective—namely, the practical—will be here amply made up, and no advantages which they furnish excepting the honorary distinction of degrees will be here unpossessed." The syllabus as laid down by Dr. Golding was indeed astonishingly comprehensive for its date (1822), for it included instruction in things medical and chirurgical, in electricity and galvanism, in the art of operations and the use of baths, and took note also of diseases of tropical climates, and of the professional duties of the public services, which at that date meant the medical services of the army and navy. Dr. Golding was evidently a very remarkable man, quite practical and quite prescient, a rare combination of qualities.

Dr. Hunter describes the rise and progress of the school and the hospital, and deals briefly with the origin of the other great hospitals of London, chiefly by quoting extracts from the writing of Dr. Golding himself as given in his "Historical Account of St. Thomas's Hospital, Southwark, 1819." Loving mention is made of David Llewellyn, formerly a student of the hospital, who was surgeon on board the Confederate war steamer *Alabama*, and who went down with his ship in 1864 rather than imperil the wounded by getting on board their boat; of P. B. Conolly, A.M.S., who died on service in the Gordon Relief Expedition; of David Livingstone and Thomas Henry Huxley—all students of the hospital and all men who strove in different ways and in different fields to benefit their fellow men. To Huxley is devoted a whole chapter; he was elected, in company with his brother James, a free student of the hospital in September, 1842, and remained there until 1846, when he entered Haslar Hospital.

The volume closes with an account of recent developments of the school between 1911–14 and the roll of benefactors from the foundation until the present day. Not the least interesting part of Dr. Hunter's excellent compilation is the number of plates illustrating Charing Cross and its neighbourhood in times past. They have been carefully reproduced from old prints, maps, and plans, and show how fair and dignified a place was the Strand and its neighbourhood at least down to 1600.

Dr. Hunter and Dr. Galloway have earned the thanks of all who take an interest in the history of London, and of all medical men who care for the records of their profession.

The Unconscious: The Fundamentals of Human Personality, Normal and Abnormal.

By MORTON PRINCE, M.D., LL.D., Professor (Emeritus) of Diseases of the Nervous System, Tufts College Medical School; Consulting Physician to the Boston City Hospital. New York: The Macmillan Company. 1914. Pp. 549. Price 9*s.* 6*d.* net.

THE discussions which have raged round the question of the subconscious mind have not sufficed, it would appear, to clear the air. The actuality of the subconscious mind is still as confidently asserted as denied. Unfortunately, the term, as commonly used, has many meanings, and at the same time the error still persists of confounding facts with theories based upon facts. In a series of lectures on abnormal psychology Professor Morton Prince has proceeded by first of all describing facts, and thereafter by induction he has formulated theories to explain these psychological facts. The lectures have been elaborated into the present volume, in which the problems of psycho-physiological functions and mechanisms are considered with deep insight.

Professor Morton Prince establishes the idea of the subconscious mind as a theory based upon observed facts. He distinguishes two classes: "(1) the unconscious, or neural dispositions and processes, and (2) the co-conscious, or actual subconscious ideas which do not enter the content of conscious awareness." The former processes are purely neural or physical, the latter are psychological or ideational, but both are types of subconscious processes. The reader must be careful to grasp the sense in which Professor Morton Prince uses the term "unconscious," as it differs from that held by other workers in the same field. He employs the term "neurograms" for concepts devoid of the psychological attributes of any of the elements of

consciousness; whether these neurograms are ultimately psychical or physical is, in the author's view, immaterial. In another place he says that "the unconscious is the great storehouse of neurograms which are the physiological record of our mental lives." Neurograms are "dispositions" or residua deposited by the neural processes underlying the experiences of conscious life. While the conscious guidance of life depends on memory-experiences derived from the unconscious residua just mentioned, the latter may remain functioning as processes quite unaccompanied by conscious equivalents; here the author classes emotional dispositions and instincts.

In the co-conscious division of the subconscious mind we are dealing with unconscious processes that have conscious accompaniments, which do not, however, enter the focus or fringe of awareness. Such subconscious ideas often possess a marked degree of autonomy, and are capable of determining or inhibiting conscious processes of thought. By hypnotic and other methods such phenomena can readily be demonstrated. The personality is thus composed of various factors, some acquired, some innate; on their harmonious coöperation depends the successful interaction of the organism and its environment.

Professor Morton Prince's book may be recommended to the student of psychology and psychiatry as a valuable introduction, critical in its discussions and cautious in its conclusions, to the study of abnormal psychology.

JOURNALS.

British Journal of Inebriety.—In the July number of this periodical Lady Henry Somerset discusses the treatment of women drunkards in the light of her experience at the Duxhurst Colony. She emphasises very strongly the importance of giving attention to the physical factor in inebriety, not only on account of its intrinsic significance, but also because by laying stress upon it we are in some measure diminishing the patient's painful sense of moral degradation, and are so preserving the feeling of self-respect. For the same reason homilies on the results of alcoholic excess are unnecessary and undesirable. The best lesson in this sort that the patient can learn will be given by the spectacle of other patients who come to the home when she herself is on the road to recovery. Lady Henry also reiterates her belief in the importance of putting the patient to some occupation that she has never engaged in before, so that the process of moral and mental re-education may not be hampered by associative trends connected with the alcoholic past.—Dr. Jon Alfred Mjoen, of Christiania, contributes a very interesting but rather too condensed article on Sociological Aspects of Recent Legislation in Norway Relating to Alcohol and Alcoholism. The legislation specially referred to is an enactment establishing a system of differential control and taxation of beers according to their alcoholic strength, beers containing less than 2½ per cent. of absolute alcohol being saleable without restriction and paying minimal duty, while beers of higher alcoholic content up to 5½ per cent. are subject to progressively increasing taxation, and can be sold only if the municipal council of the district gives its sanction. Beers with more than 5½ per cent. of alcohol are prohibited for general sale. Beers are classified in accordance with these principles, and the law requires that each bottle sold shall have the class indicated on the label. Dr. Mjoen, who has been largely responsible for the passing of this law, explains briefly the scientific grounds on which its provisions are based. He holds that experimental and clinical evidence shows that the action of alcohol on the organism is largely dependent on the degree of concentration, very dilute solutions being practically innocuous. Further, he maintains that the germ cells are extremely resistive to all toxic influences, including the influence of alcohol, and this to such an extent that it may be questioned whether alcohol ever acts as a germ poison except in so far as it checks a regenerative tendency in defective germ-plasm. In any case, it requires a much higher concentration of the toxic agent to cause injury to the drinker's offspring. These principles govern the classification of beers in the new Norwegian law, beers of the privileged class being such as are considered to have no injurious effect either on the individual drinker or on his offspring, beers of Classes II. and III., which are made subject to local option, being alcoholic to the extent that they are injurious to the individual but not to the race, while beers in the prohibited Class IV. are highly alcoholised, and therefore may be capable of a detrimental action on the germ-plasm. Apart from its importance as a reasoned experiment in temperance legislation, the Norwegian law is of interest from the avowedly eugenic tendency by which it is inspired. Other articles in this number deal with life in an inebriate retreat as seen from the patient's point of view, with the relation of alcohol to tuberculosis, and with the need of early treatment in inebriety.

BRITISH MEDICAL ASSOCIATION.

EIGHTY-SECOND ANNUAL MEETING AT ABERDEEN.

THE SECTIONS.

STATE MEDICINE AND MEDICAL JURISPRUDENCE.

WEDNESDAY, JULY 29TH.

President, Professor MATTHEW HAY (Medical Officer of Health of Aberdeen).

The PRESIDENT, in his opening address, said that it was to many a matter of surprise that the section should combine two subjects on the whole so different as medical jurisprudence and State medicine, although these two subjects were combined in the chairs in some of their medical schools in Scotland. He thought it was in the interests of both subjects, however, that their combination should cease, as they would do in the University of Aberdeen whenever he relinquished his chair, and he was glad that a full-time lecturer in public health had recently been appointed. He could not help at times contrasting the attitude of the public mind towards, on the one hand, the hunting down and the extermination of the murderer of a single human life, and towards, on the other hand, the discovery and removal of the cause of an epidemic of disease by which hundreds of human lives might be perishing. As an instance, a single murder, such as the Crippen case, excited apparently far more human interest and attention than a devouring pestilence such as the plague in India, from which two or three million persons died a few years ago. In these days there were so many addresses on health matters that he would devote the remainder of his remarks to medical jurisprudence, and especially to the chief subject of it—the criminal. He was glad that there was a steadily growing desire to see justice done to the criminal, but not the kind of justice which such a phrase would have implied a hundred years ago. The modern study of lunacy had led to an infinitely more humane and just treatment of the ordinary lunatic, and had as a side issue led to a closer study and understanding of the criminal. Viewed from the standpoint that everyone was physically, mentally, and morally in the main what his parentage and environment made him, it would be more appropriate to talk of the treatment of the criminal and less of his punishment. The public were now becoming alive to that side of the question in criminality as much from their education by the biologist and the sociologist as from the teachings of medical men, though he thought the legal profession had accepted such views with much, perhaps excusable, caution. America with its Borstal system led the way a considerable number of years ago, and in this country they were rapidly following, the latest step being the Mental Deficiency Act, which, if whole-heartedly worked throughout the country, could not fail to introduce a new era in the treatment of defectives, intellectual and moral, and to lessen crime both directly and indirectly. In a community of ideal civilisation all measures for dealing with crime would aim at its prevention and not at its punishment. The one barbarity remaining in this and other countries, when in other matters the modern humane and scientific

view was increasingly held, was the death sentence, the only justification of which, in his opinion, was the eugenic one, but the eugenic end could be otherwise attained. Finally, as with disease so also with crime, prevention was better than cure. And in that saying the union of State medicine and medical jurisprudence might after all find justification.

Sir VICTOR HORSLEY opened a discussion on

The Reform of the Vital Statistics of the Nation, with Special Reference to Death Certification.

He alluded to the leading part which the British Medical Association had always taken in dealing with this subject. The proposals of the Association had passed unheeded by statesmen, partly on account of official inertia and partly owing to the remissness of the medical profession in not furnishing the Government departments with a classification of diseases of real scientific value. The "Nomenclature of Diseases," which bore the imprimatur of the Royal College of Physicians of London, was essentially ridiculous in its terminology, as it was really only a list of symptoms. The profession had been led or encouraged by this volume to employ expressions which were hopelessly inadequate. One of the worst instances was a cause of death called "hysteria, neuralgia, neuritis." These diseases were stated by the Registrar-General to have caused the deaths of 558 persons in 1911; 57 were stated to have died from "hysteria, neuralgia, and sciatica," and 501 from "neuritis." Of course, the neuritis deaths were really due to alcohol, yet in only 80 cases did the practitioner certifying venture risk to his professional practice in adding the real cause of death—namely, alcohol. As the moral responsibility for the present situation would seen to rest considerably on the profession, his first proposal was that their Association should move in the matter and produce a real nomenclature of diseases from which all the old loose terms and archaic names were expunged. Sir Victor Horsley next dealt with the question of direct confidential certification of death, on which subject the British Medical Association had formulated its views ten years ago. In 1904 the Medico-Political Committee had recommended that the medical practitioner should transmit to the registrar direct the certificate in a sealed envelope, that this certificate should be a confidential document subject to the discretion of the Registrar-General, that the practitioner should be required to view the body after death, should be paid a fee for the certificate, and that in doubtful cases a necropsy should be performed at the cost of the State. The principles of the Association's scheme were laid before the Registrar-General by a deputation which fully explained the urgent necessity of altering the system of death certification because the national death statistics were so utterly untrustworthy; yet nothing was done, and probably nothing would have been done had it not been for the appointment of the Royal Commission on Venereal Diseases, which naturally required to know how many deaths really occurred in the nation from venereal diseases, the certification of which was notoriously as worthless as that of alcohol. Sir Victor Horsley referred shortly to the systems adopted in France and Switzerland, giving special praise for simplicity and completeness to the Swiss system. A most important reform in our vital statistics was the notification of births. Unfortunately the adoption of this principle had been marred by two administrative errors, against which the British Medical Association protested, but, as usual, in vain. In the first place, the Act was only permissive and not compulsory, and in the second place it made no provision for the remuneration of the practitioner who was called upon to do the work of the State. Closely associated with this reform of the notification of births was that of the certification of stillbirths, which the Association pressed for in 1905. This would secure for the nation national statistics on a subject on which it had practically no information—namely, ante-natal conditions, which were to a large extent responsible for the high infantile mortality. In conclusion, Sir Victor Horsley urged that the office of the Registrar-General, instead of being, as it was now, a sub-office of the Local Government Board, should be completely reconstituted as a sub-office of a Ministry of Public Health; and, in the second place, the Registrar-General ought to be someone who had received a medical education and thoroughly understood the biological problems of vital statistics.

Dr. W. BRUCE (Dingwall) confined himself to the public health aspect of the question. He laid stress upon the dread of certifying practitioners of want of secrecy, which caused them to avoid the use of such terms as cancer, puerperal fever, or venereal disease. When a Minister of Public Health came to be appointed the whole system of medical certification would have to be revised, and the procedure connected with the registration of births and deaths might be concentrated in the offices of the medical officers of health.

Dr. J. C. DUNLOP (superintendent of statistics, Edinburgh), while agreeing as to the aspersions on the "Nomenclature of Diseases," yet pointed out that it was not the official book in Scotland. He did not think, however, that it encouraged the use of ill-defined terms to the extent suggested by Sir Victor Horsley. In his experience 99 per cent. of death certificates were well drawn up, but the remaining 1 per cent. were often exceedingly bad. He quoted a number of curiosities of medical certificates which he had come across, including the following: "Shock, the result of hard labour." "Senile decay; duration 5 years, 6 months, 22 days." "Senile decay; duration 5 days." "Drowned in mountain canal while trying to retrieve his wind-tossed cap from the muddy deep." "Natural causes, or the result of falling into a ditch at the side of the railway." "Tonsillo-laryngo-tracheo-bronchitis." "Cerebral enteritis." The kind of certificates he objected to were those of "debility," "jaundice," "old age," "asphyxia." There was often a confusion in medical men's minds between the cause of death and the mode of death. As to confidential certification, it should be borne in mind that medical statistics were merely a by-product, and if even very important were secondary to death registration. The register was public, and if the certificate was confidential it could not go into the register. He pointed out that in Scotland since 1855 the death certificates were sent straight to the registrar. With regard to stillbirths, what was wanted was notification of them, simply for statistical purposes, not registration. He did not at all agree with Sir Victor Horsley's proposal that the office of Registrar-General should be part of a Ministry of Public Health, and as legal knowledge was as important as medical, he did not think it advisable that the Registrar-General should be a medical man. He was not in favour of the proposal that the general practitioner should send the death certificates to the medical officer of health.

Dr. F. E. WYNNE (medical officer of health of Wigan) thought that a great deal of the confusion in the "Nomenclature of Diseases" arose from an attempt to classify diseases on an anatomical instead of on a pathological basis, as ought to be done. As an instance of this he mentioned that apoplexy as a cause of death was given under the heading of nervous diseases, because it was a hæmorrhage occurring in the brain, whereas on a pathological classification it should, of course, be included under diseases of the circulatory system. There was also great confusion in the classification of diseases of the thyroid gland, and he suggested that there ought to be a special section for diseases of the ductless glands. Then, again, he would like to see the term "croup" finally deleted from the "Nomenclature of Diseases," and laryngitis divided into infective and non-infective forms. As to "old age," it was not a disease, but the natural termination of a healthy life, and he thought the weekly returns should record the number of persons who achieved this ideal, even if an attack of bronchitis had cut short their career after 90 years of pilgrimage.

Dr. A. K. CHALMERS (medical officer of health of Glasgow) dealt with the international list of causes of death issued by the Census Bureau of the United States, the chief interest in which for the present purpose was in two recent changes in the method of tabulating the data on which the vital statistics of Scotland were based. These were (1) the substitution of the public health administrative area for the registration district, or group of districts, as the geographical unit; and (2) the introduction of a system of transferring births and deaths from the place of their occurrence to that of the usual place of residence of the mother or of the deceased person. The object of the international list was to secure a uniform basis for international comparisons, and the first step in the process was to secure uniformity in national and local returns, and the coöperation of the medical officer of health would, in his opinion, assist this end.

Dr. J. J. BOYD (medical officer of health of Pretoria) was

strongly of opinion that the medical officer of health was the proper person to collect statistics.

After some remarks from Dr. D. McCOLL (Tamworth), Dr. D. MURRAY (Stornoway), and Mr. T. LAFFAN (Cashel), Sir VICTOR HORSLEY replied, and said that he had never taken part in a discussion which proved the truth of all he had advanced more than the discussion that day. Dr Chalmers's paper had proved that our system was a complete chaos, and that the international lists were absolutely chaotic nonsense. He concluded by moving the following resolution, which was seconded by Dr. BRUCE and carried unanimously:—

That the British Medical Association reaffirms its opinion that extensive reforms in the administration of the national statistics of life and death are urgently needed, especially the immediate institution of a confidential system of death certification, and the Association therefore calls on the Government to introduce legislation to effect this essential change in the public health service.

Dr. J. C. McWALTER (Dublin) read a paper on

The Necessity for Reforming the Coroner's Inquest,

in which he suggested that the coroner should be a registered medical practitioner and also a barrister or LL.B., or else a solicitor who was on the Medical Register.

Dr. W. G. AITCHISON ROBERTSON (Edinburgh) said that without departing from the privacy of his inquiry it was desirable that a procurator-fiscal should associate himself with a medical man in the investigation of any suspicious death. That should be done during the precognition of witnesses, and it might be a different medical man from the one engaged at the post-mortem examination.

THURSDAY, JULY 30TH.

The second session of the section was entirely taken up with a discussion on

The Administrative Treatment of Tuberculosis in its Various Aspects.

Dr. JOHN T. WILSON (county medical officer of health of Lanarkshire), who opened the discussion, said that the treatment of tuberculosis from an administrative point of view had acquired an importance little dreamt of some years ago. Up to then charity and the Poor-law were the agencies which the working classes had to rely on when affected with tuberculosis. The change was no doubt in large measure due to the National Health Insurance Act, which provided sanatorium benefit from July, 1912. The questions he would like to suggest for discussion were: Who were to receive treatment, and how was the treatment to be carried out? The schemes for providing institutional treatment in the county sanitary districts of Lanarkshire would when complete provide (1) a sanatorium and work colony, special accommodation, including an open-air school, being provided for children; (2) several hospitals were already in use, one of these having special accommodation for surgical cases and being equipped with an X ray apparatus; and (3) one or two dispensaries in populous places were being tried, but in country districts reliance was mainly placed upon visits to the home by the staff of tuberculosis officers. The institutional staff included three resident medical officers and a consulting surgeon, and there were six outdoor tuberculosis officers. The number of beds in use in county institutions when the scheme was complete would be over 300, which gave a proportion of over 1 bed per 1000 of the population entirely devoted to the treatment of tuberculosis. He was in favour of compulsory notification of the disease, but feared it would be difficult to adopt the suggestion of the Astor Committee that the cases to receive institutional treatment should include those in which the disease was strongly suspected but in which there was no evident impairment of the working capacity. He had found that working men who had a wife and family and were earning good wages were often very reluctant to accept institutional treatment so long as their general health was not seriously impaired, on the ground that their dependents would not be properly provided for; and mothers with a large family soon grew restless under institutional treatment. Of all classes of the community children presented the best field for treatment of this kind, as they could be kept under control for an indefinite period. Under present conditions domiciliary treatment was unsatisfactory, but with better housing of the working classes it would be a valuable aid in dealing with tuberculosis.

Dr. ALEXANDER S. MACGREGOR (assistant medical officer of health and tuberculosis officer, Glasgow) considered some points of administrative detail in the evolution of a complete scheme for a large industrial urban district. There were established in Glasgow 6 dispensaries serving 7 dispensary districts containing population groups of from 75,000 to 220,000 persons. The staff consisted of 6 whole-time medical officers, 14 nurses (a number about to be increased to 21), 3 dispensers, and 4 clerks. With regard to institutional treatment, he considered that the ratio suggested by the Departmental Committee of 1 sanatorium bed and 1 hospital bed for every 5000 inhabitants was not applicable to a large city. There were at present only 182 beds available for advanced tuberculosis cases in Glasgow, but they were providing 220 beds at Ruchill Hospital and 266 beds at Robroyston. They were also providing 250 sanatorium beds, a total of 736 beds for pulmonary phthisis, which gave a ratio of 1 bed to 1500 persons. The aim of domiciliary treatment was to render the home as suitable as possible for treatment, for which purpose various resources could be used, such as statutory powers under the Public Health and Housing Acts, provision of beds and bedding, to enable the patient to sleep alone, nursing attendance if required, Poor-law relief, medical extras, and charitable aid.

Dr. J. J. BUCHAN (medical officer of health of Bradford), speaking of surgical tuberculosis, thought that in that respect future development should be along sanatorium rather than hospital lines. In the older methods of treating this disease the cases were usually admitted to hospitals or infirmaries for surgical treatment, and when this was partially carried out by operative procedure they were discharged for prolonged dressing at home, frequently in very bad surroundings. He was of opinion that cases of surgical tuberculosis should be treated to a termination, and regarded the lines of treatment carried out by Mr. H. J. Gauvain at Alton as ideal in this respect.

Dr. GEORGE JESSEL (Wigan) gave details as to the organisation and management of the tuberculosis dispensary at Wigan. He thought the dispensary should exercise supervision over home conditions and hygiene rather than give actual treatment. That should be left to the panel doctor, who in some places had been allowed to escape from his responsibilities, with the result that the dispensary had become a mere out-patient department, which was entirely contrary to the spirit of the Astor report.

Dr. J. GUY (tuberculosis medical officer, Edinburgh) attributed the lowering of the tuberculosis death-rate to progress in sanitation, especially better drainage and improved housing, social uplift, and educational advancement. Three cardinal points to produce a further fall were: a sufficient living wage for every worker, a house in which he could live hygienically, and that every woman should be trained to manage her house economically. He believed that the local authority was the only one that could deal adequately with this problem, and urged a concentration of forces and coöperation between medical officers of health and tuberculosis officers. There ought also to be whole-time veterinary inspectors in all districts to ensure a supply of pure milk.

Dr. J. E. ESSLEMONT (Bournemouth) professed a profound distrust of domiciliary treatment. He advocated the formation of industrial colonies for sufferers from tuberculosis, large communities of 20,000 or 30,000, where patients could live under garden-city conditions, and carry out the occupations for which they were best fitted, receiving remuneration for their work.

Dr. D. J. CHOWRY-MUTHU (Wells, Somerset) gave his impressions of a recent tour in India, when he investigated on the spot the extent of tuberculosis, and found the mortality higher than in England, and increasing rather than diminishing.

Dr. W. M. CROFTON (Dublin) read a paper on

Prophylactic Inoculation against Tuberculosis.

He based his views upon the theory that persons only developed tuberculous disease whose resistance to the disease was subnormal, and that prevention of the disease could be attained by raising the resistance of every individual to normal. He discussed the causes of tuberculosis under four heads. 1. Bad hygienic surroundings, showing by statistics how the mortality increased under such conditions, but was still too high (1·92 in Dublin) among the middle classes. 2. Lowering of resistance by infection with other disease, instancing the

predisposition of children to tuberculosis by measles and whooping-cough. He had found that catarrhs of the respiratory tract predisposed to tuberculosis, and that curing of a "cold" by autogenous vaccine would often prevent the development of phthisis. Pyorrhœa alveolaris was another predisposing cause, which could be removed by vaccine therapy. But it was not enough to increase the resistance to these affections, unless the resistance to the tubercle bacillus itself was increased. 3. A low resistance might be inherited. 4. A normal resistance might be overcome by a massive or continuous infection with virulent microbes. The only way to bring up a low resistance to normal or to increase a normal resistance was the production of specific antibodies in the individual by inoculating him with a vaccine of the particular microbe; and his practice for the last eight years had been to urge the members of families whose parents were tuberculous or in which cases of tuberculosis had occurred to undergo a short course of tuberculin. He used Koch's T.R., the doses for adults being as a rule 0·001 c.mm., 0·005, and 0·01, and for infants three months old 0·0001, 0·0005, 0·001.

Dr. EDWARD E. PREST (medical superintendent of the Ayrshire Sanatorium) read a paper on

Sanatorium Benefit, and the Position of Sanatoriums in their Relation to the Treatment of Chronic Cases of Pulmonary Tuberculosis.

He said the funds provided were insufficient, and he advised officers not to spend money on mere palliatives. There were very few efficient sanatoriums, and many of them were the resort of cases which had been allowed to go on insufficiently treated at home. The value of tuberculin had been, in his opinion, greatly exaggerated.

Mr. LAFFAN spoke of the difficulty in some parts of the country of getting milk, and advocated the compulsory acquisition of milk from farmers at a reasonable price.

Dr. J. A. WATT (Derby) thought that six weeks in a sanatorium was quite sufficient for most cases, purely for educational treatment. If patients remained longer they were apt to become lazy and indolent. In his experience 15 per cent. of cases were wrongly diagnosed.

Dr. MCWALTER regretted that he had to take a pessimistic view, but in his experience sanatorium treatment was a hopeless waste of money. He had noticed three things which seemed to have some effect in preventing tuberculosis: (1) Smokers were not so susceptible to the disease as other members of the community; (2) consumers of garlic and onions, no doubt due to the presence of sulphide of allyl, were less susceptible; and (3) those who consumed lime-salts, either in the form of water or in brown bread, were less susceptible to tuberculosis.

Dr. F. MACRAE (tuberculosis medical officer, Aberdeenshire) said there was nothing to equal the sanatorium, but he believed in prolonged treatment there. His experience of tuberculin treatment was not favourable. Six children were treated with it and six control children treated in the ordinary way with cod-liver oil, &c. Five of the tuberculin-treated children put on weight and were sent to a convalescent home a month earlier than the control cases. In nine months, however, the five tuberculin cases were dead, and the six control cases were alive. This showed that while the initial resistance was increased the ultimate resistance was decreased.

Dr. D. D. GOLD (Hereford) emphasised the value of observation beds in connexion with dispensary treatment. He believed that money spent on domiciliary treatment was absolutely wasted.

Dr. J. C. THOMSON (Maxwelltown), Mr. T. HENNESSY (Clogheen), Dr. MURRAY, and Dr. R. MILNE (London) also spoke.

Dr. WILSON, in his reply on the discussion, agreed with those speakers who deprecated domiciliary treatment, as he considered it useless under present conditions.

There appeared to be general agreement, with the exception of Dr. MCWALTER, as to the value of sanatorium treatment, especially for education purposes in chronic cases and as a curative measure in early cases. There was considerable difference of opinion expressed as to the efficacy of tuberculin treatment.

FRIDAY, JULY 31ST.

The last day's session of the section commenced with a discussion on

Malingering,

which was opened by Sir JOHN COLLIE (London), who in the course of his paper drew special attention to the influence of the mind on the body as an important factor in the revelation of truth in accident claims and gave details of several cases illustrating this point. In each of the cases mentioned the functional disease originally induced by shock and suggestion was cured by powerful counter-suggestion, by forcing, as it were, into the patient's consciousness the idea that he was quite capable of doing his work if he only knew it. He believed that in that class of case occupation of some sort was the keynote of cure. The whole secret in treatment lay in getting the patients to adjust their mental processes to their environment. In cases which were contested the "law's delay" accounted for a great deal of prolonged disability, and the development meanwhile of functional disease. While waiting for a settlement, and especially while waiting for the trial of his case, the workman had little or nothing but his health to think of; he was unable to concentrate his thoughts on anything but his body, and hence became a prey to all sorts of pains and discomforts and sensory stimuli which he would in other circumstances ignore. When confronted with these difficult cases the first and all-important step to take was to make as certain as possible that there was no organic disease present. That was by no means easy, as certain organic diseases in their incipient stages closely resembled hysteria, neurasthenia, or still more the hybrid hystero-neurasthenia. The most likely diseases to cause mistakes were disseminated sclerosis, general paralysis of the insane, and tabes. The point many were apt to forget was that a serious disability was none the less existent because it was psychic in origin. Speaking generally, the more an accident resulted in actual physical injuries, such as broken bones and so forth, the less likelihood there was of serious nervous sequelæ, especially if the case was wisely treated from the first. It had been his practice for some time to induce insurance companies for whom he acted to send their milder cases to a trained masseur, who supplied not only massage but psycho-therapeutic treatment in the form of candid advice and encouragement to use the affected joint. The severe cases he sent to Maida Vale Hospital for Nervous Diseases, where they received admirable psychotherapeutic treatment. That institution alone had within the last few years cured between one and two hundred cases of the class referred to. Referring to National Insurance, he cited the figures of a society with more than a quarter of a million members spread all over the country. Rather more than a quarter of its members resided in the district which was served by the society's own medical examiners. The amounts per head paid to those members were—men, 8*s.* 2*d.*; women, 5*s.* 4½*d.*; while those in the other parts of the country who were left to haphazard medical attendance received—men, 12*s.* 11*d.*; women, 13*s.* 10½*d.* The estimated amounts required were—men, 11*s.* 11*d.*; women, 7*s.* 7½*d.* It was obvious that the proper exercise of the medical man's duty effected a considerable saving. One explanation of the excess in the case of women was to be found in the fact that the sickness payment to women was within a few pence of the average amount earned by women workers throughout the country. There was therefore very little, if any, inducement to disregard the minor ailments, but rather an encouragement to avail themselves of their anæmic and other conditions in order to obtain a temporary respite from the hardships of daily toil. If all medical men would conscientiously and fearlessly perform their duty in accident cases an enormous reduction would be made in the burden thrown on the employers, and the large increase that had occurred in the compensation charge would be greatly reduced, if not entirely wiped out. Sir John Collie concluded by referring to arbitration cases, 98·7 per cent. of which, he said, were in 1912 actually settled out of court. Workmen and their solicitors knew that employers had always to pay the costs, and a large proportion of the cases were settled by processes which might be described by an ugly word. In cases which were decided by the courts the percentage of verdicts in favour of employees had risen from 18 per cent. in 1908 to 24 per

cent. in 1912, which meant that if a workman was unlucky enough to be caught by the 100 to 1 chance of having his claim brought to court he still had more than a 5 to 1 chance of winning in 1908, and a 4 to 1 chance in 1912.

Dr. L. A. PARRY (Brighton) dealt with the difficulties of diagnosis, but was convinced that with sufficient experience and careful examination a proper opinion could be formed in the great majority of instances, and quoted some cases in support of this conviction. He complained of the careless way in which medical certificates were often given, and thought that if a consultation of all the medical men engaged in a case could be held before court proceedings the lamentable spectacle of medical men differing from each other on every point in the witness-box would be avoided.

Dr. HENNESSY (Clogheen) took exception to Sir John Collie's reference to "haphazard" doctors, as he considered that the so-called "haphazard" doctor was in most instances in a better position to judge whether a patient was malingering or not than the society doctor. He referred to the class of medical men in Ireland known as "medical advisers," whose functions were chiefly directed to keeping down the amount of money paid in sickness benefit, apart from the merits of the case. He instanced cases of a "medical adviser" certifying a case of Bright's disease as fit for work without even examining the urine, and of another certifying a man suffering from appendicitis as fit for work who in the course of a few days had to be operated on.

Dr. A. DRURY (Halifax) thought there was a danger of exaggerating the evil of malingering, which was no new thing, but had been brought into special prominence by the Insurance Act. There was also a serious danger in assuming, as specialists in any particular department were apt to do, that people were suffering from the diseases those specialists were usually in the habit of dealing with. Thus, if one went to Sir John Collie one felt one had got malingering. Formerly the medical profession were regarded as the enemies of the people, now they were regarded as the enemies of the societies. In his opinion working men were on the whole less disposed to malingering than any other class. They saw plenty of malingerers in their consulting-rooms. He entered a strong protest against the demand of the societies that they should certify a patient as suffering from a definite disease the first time they saw him. When a patient was told what the trouble was he bought a sixpenny popular book on medicine, and if he was inclined to malinger he could learn up the symptoms. What was wanted was a proper relationship between doctor and doctor and a better understanding between the societies and the medical profession.

Sir JOHN COLLIE, in reply, quite agreed that many cases could be cut short by medical consultations, but the difficulty was that there was nearly always some fighting spirit on one side or the other which absolutely refused to concede any point whatever. As to the suggestion of preconception on the part of the specialist, it always was exceedingly difficult to be impartial, but he ventured to think that experience taught one to be on one's guard against the obvious injustice of assuming that a person was malingering simply because he came to see one.

Dr. ROBERT MILNE, medical officer to Dr. Barnardo's Homes, London, read a paper on

The Prevention of Infectious Disease.

In his opinion one of the surest ways for the dissemination of scarlet fever, measles, diphtheria, tuberculosis, syphilis, and possibly dental caries, was the common custom in the schools of the country of indiscriminate using by all the children of pens, pencils, and ink erasers, which were never washed or disinfected, though children were in the habit of constantly sucking or chewing these utensils. Every child in the homes under his care had its own pen, pencil, &c., carefully washed and kept for its own use only. The management of a case of infectious disease consisted of two factors—the prevention of infection and the prevention of complications; and the provisoes he laid down were that the treatment must be commenced early and must be carefully carried out. The essentials of his treatment were early and thorough swabbing of the tonsils and pharynx as far up and down as possible with 10 per cent. carbolic oil every two hours for 24 hours.[1] It was rarely necessary to continue it longer in cases of scarlet fever, but it was an advantage to carry it out three times a day for a few days in measles. In addition the patient should be gently rubbed all over the body with pure eucalyptus oil both morning and evening for the first four days, afterwards once a day until the tenth day of the disease. The advantages he claimed for his methods were: 1. Absolute freedom from infection spreading, even with serious operation cases in the ward side by side, absolute freedom from cross infections and from secondary infections, and consequently from complications. 2. Return cases were unknown. 3. Children might safely occupy and sleep in the same room, and even in the same bed. 4. National economy. Cases in hospitals cost the ratepayers from £10 to £30 per patient; the cost of his method, including the supply of all necessaries, was from 2*s.* 6*d.* to 5*s.* per case. 5. Household economy. The mother was free to attend both to the patient and to her duties; the father was free to go to work, and the healthy children to school. 6. No after disinfection was necessary, for the disease had been destroyed. There was no need for destroying toys, books, &c. 7. The cases were milder and the duration of the illness was less. After ten days his patients were at school and church with hundreds of other children. 8. The disappearance of the trouble from a district, which naturally followed when the disease was destroyed.

Dr. JOHN RUSK (Belfast) agreed with Dr. Milne that scarlet fever was better treated at home than in hospital. His treatment was somewhat similar to Dr. Milne's, but he used carbolic lotion, not oil, for washing the skin, and he used formamint or formaldehyde lozenges for the throat in scarlet fever. He had had no complications and no deaths in either disease under his treatment.

Dr. BUCHAN read a paper on the Period and Duration of Infectious Disease, which was discussed by Dr. J. J. PATERSON (Maidenhead), Dr. J. M. MORRIS (Neath), Dr. MILNE, Dr. WYNNE, and Dr. J. M. CLEMENTS (Beckenham). There was a general agreement in the difficulty of dealing with diphtheria carriers, the inutility of closing schools, especially in epidemics of measles, and the lessened virulence of scarlet fever in recent years as contrasted with the increased severity of measles. There was not much support for the efficacy of prophylactic injections of antitoxin against diphtheria.

Papers were also read by Dr. FARQUHAR MACRAE (Aberdeen), on Anaphylaxis in the Antitoxin Treatment of Diphtheria; on Intracellular Parasites in Acute Measles and Scarlet Fever, by Mr. E. H. ROSS (Lister Institute, London); and on the Advisability of Suitable Steps being Adopted by the State and by Municipal Authorities for the Early Treatment of Cancer, by Mr. C. P. CHILDE (Portsmouth).

OPHTHALMOLOGY.

WEDNESDAY, JULY 29TH.

President, Mr. C. H. USHER (Aberdeen).

The PRESIDENT opened the proceedings with a few words of welcome to the members and guests present.

Dr. E. E. MADDOX (Bournemouth) opened a discussion on

The Choice of a Cataract Operation.

He said that the matter was to be considered from as many as five different points of view; each of these was of importance, though possibly not of equal importance. First, he would place safety; secondly, the ultimate visual result; thirdly, the beauty of the eye; fourthly, brevity of procedure; and, fifthly, fewness of operative interferences. As regards safety, which was the paramount consideration, the three usual operative measures might be put in the following order: (*a*) Preliminary iridectomy; (*b*) combined extraction and iridectomy; and (*c*) simple extraction. The first of these procedures undoubtedly gave increased safety in the long run, but the method was not popular with patients, for it meant two operations and two spells of lying up instead of one. It lessened the chances of hæmorrhage into the anterior chamber. It taught the surgeon a good deal about the behaviour of the patient. It often had a good effect upon the health of the eyeball, and if the cataract was immature it might hasten its maturity. Almost the only disadvantage besides the loss of time was the presence of a cicatrix, which at the second and major operation for the extraction of the cataract might interfere with a successful conjunctival flap. This

[1] THE LANCET, vol. i., 1911, pp. 1070, 1642.

latter disadvantage could be avoided by using a special keratome, or, at any rate, a very narrow one, for there was not the least necessity to make a wide incision, the iridectomy needing only to be of the smallest size. The iris should be withdrawn through this small incision with a Tyrrell's hook, or an extremely fine pair of iris forceps with the teeth on the lower edges of the blades. Combined extraction was suitable when the loss of a few days might be of importance to a patient. In India preliminary iridectomy was impossible. The following were the disadvantages of the procedure: (1) the filling of the anterior chamber with blood from the cut iris; (2) the falling of the iris across the knife; and (3) the longer time it took to complete the operation, and therefore the added risk there was of the patient squeezing up the eye and endangering it. The simple operation gave results far more perfect than any other type of operation, and were it only as safe as the two foregoing methods it would be the operation of election, and, indeed, the sole form of operation practised. It was, however, never quite free from the danger of prolapse of the iris after the extraction, but this accident was much lessened by the use of sutures to fasten down the conjunctival flap; Desmarres's bridge operation was even better still as a safeguard. Peripheral iridectomy or iridotomy did not appeal to him as satisfactory. After a simple extraction he was accustomed to use pilocarpine. The chief advantages of this mode of operation were: (1) the visual benefit with or without glasses which was far better than when a coloboma was present; (2) the adaptation of the pupil to light; (3) the beauty of the result; and (4) the lesser chance of the capsule being impacted in the wound. Its disadvantages were: (1) the risk of prolapse; (2) the imperfect evacuation of the cortex; (3) the large incision required; and (4) the risk of contamination of the iris during its temporary extrusion from within the eyeball. As regards the order of safety of the common forms of incision, he concluded it ran as follows: (*a*) subconjunctival; (*b*) with conjunctival flap; (*c*) limbal; and (*d*) intracorneal. A corneo-scleral flap had the following advantages: (1) it bound up the wound as though by the application of adhesive plaster; (2) it protected the most vulnerable part of the wound from infection; (3) it put the severed cornea in immediate communication with the circulation of the eyeball; and (4) unless there were ballooning of the iris the probability of prolapse after simple extraction was lessened, and greatly so if sutures were used. He had, however, entirely given up the use of sutures, and had taken to the use of the bridge operation introduced by Desmarres in 1851 and revived from time to time. It conferred all the benefits of sutures without having to spend the time and trouble of inserting them. The vitality of the flap was greatly increased, the nutrition of the cornea was far less impaired, and the upper lid could not engage in the incision nor disarrange the flap, while the safer and more rapid union permitted greater freedom to the patient with earlier restoration of exercise. The bridge method had two disadvantages: first, the cortex could not be enucleated without some difficulty; and, secondly, the speculum could not be removed before the lens was extracted. Desmarres and Cluckie gave the measurements of the bridge of conjunctiva as 4 mm. wide and about 10 mm. long, and it should be cut from the centre of the corneal flap. Dr. Maddox thought it better to cut the bridge from the more nasal portion of the corneal flap, making the temporal side of the bridge longer than the nasal. He described in detail how he manipulated the bridge in extracting the lens. Lavage he thought most useful, but he strongly deprecated the use of indiarubber tubes: first, because the interior of these could never be inspected; and, secondly, because portions of the rubber were apt to be shed, and these might be washed on to the eye. He showed an ingenious instrument for avoiding the use of tubes, the whole of which was in the surgeon's hand, and the force of the stream could be modified to any degree. Whilst this instrument should always be ready, he thought that the less it were used the better. As regards brevity of procedure, preliminary iridectomy took the first place, and as regards the fourth consideration—viz., fewness of operative interferences—the intracapsular method had no rival, as it needed neither preliminary iridectomy nor subsequent needling, but its weakness, amongst other things, consisted in the fact that it was essentially a "two-man" operation, and success depended upon each doing his part perfectly. He drew attention to the disadvantages of some of the specula in use, and showed specimens of others he had introduced to diminish these poor effects.

Dr. CASEY A. WOOD (Chicago) thought that mature cataracts in otherwise healthy eyes did well with almost any operation. Immature cataracts in persons under 60 years of age were frequently complicated by some other diseased condition of the eye, and were very likely to develop iridocyclitis. It was desirable to give a course of salicylate and iodide previous to operating and also subsequently. If preliminary iridectomy were done he preferred to use a long narrow keratome and insert it far back.

Major W. E. MCKECHNIE, I.M.S., said that of current operative procedures he considered preliminary iridectomy was the safest, but no two-step operation was practical in India. The native who found his sight not restored by the first operation would at once decamp. If, therefore, it were done it was necessary to do it at the time of the main operation. Again, because of the subsequent needling so often required after the ordinary extraction, it was not so suitable as the intracapsular operation, and surgeons in Northern India were resorting to this method in increasing numbers. The official figures for the Punjab and North-West Frontier for the years 1898 and 1913 were as follows:—

—	1898.	1913.
Operations ...	4934	16,236
Cured	90·4 per cent.	94·86 per cent.—i.e., vision sufficient to get about with.
Relieved ...	3·1 ,,	1·84 per cent.—i.e., some sight obtained, but result bad.
Discharged otherwise ...	6·5 ,,	3·3 per cent.—i.e., eyes lost or did not attain vision.

In this area in the year 1898 intracapsular operations were not done, and in 1913 90 per cent. of the operations were intracapsular. Errors of technique might be let off with but slight punishment in the ordinary operation, but were apt to be severely punished in the intracapsular operations. Thus one of the fateful errors was to make too small an incision; this would be disastrous to the last degree, and the incision should be at least half the size of the cornea. The zonule of Zinn was not tough, and if difficulty was experienced in removing the lens it was due to the incision being too small. In his experience it seldom offered any appreciable resistance to the delivery of the lens. This could easily be proved when operating on the pig's eye. His own practice was to make a purely corneal incision, finishing about 1·5 mm. from the upper pole of the limbus, but he did not consider this essential, and it might be made further back if desired. In either case the delivery of the lens would be easy if the incision were large enough. He described in detail his particular method of cutting the flap and also the manipulation required to ensure the proper replacement of the iris. During the operation it was always dangerous to ask the patient to look down, for the vitreous would be sure to present if this were done. Bulging, prominent eyes, although favouring easy incision, were never good ones on account of the difficulties of the toilet. Sometimes deepset eyes were far easier to operate upon. He briefly described other operations designed for the purpose of removing the lens in its capsule. The easiest cases to extract in this way were the early immature ones, and if the incision were large enough their removal was usually attended with no difficulty.

Mr. T. H. BICKERTON (Liverpool) drew attention to the way in which surgeons varied in their practice from time to time. He himself performed the combined operation, but whenever possible he did a preliminary iridectomy.

Mr. C. DEVEREUX MARSHALL (London) congratulated Dr. Maddox on the very exhaustive nature of his paper. He said it was interesting to see from year to year how surgeons abroad, and especially in India, were taking to Smith's operation in increasing numbers, but so far the progress it had made in England and Europe had been small. He himself usually did his operations without iridectomy, though he never hesitated to do one if the iris showed the slightest sign of prolapsing. He frequently did lavage to the anterior chamber, and never used a cystotome, for he opened the capsule when traversing the anterior chamber with the knife

in making the incision. He strongly urged the advantage of early needling, and usually did it within two to four weeks after the extraction; even if a case had normal vision after extraction the capsule present might subsequently cause failure of vision, and was therefore preferably needled at once.

Mr. J. HERBERT PARSONS (London) advocated the doing of a peripheral iridectomy, and in this way he claimed that the advantages of both simple and the combined operation were obtained.

Dr. R. A. REEVE (Toronto) said he did a good many simple extractions and freely irrigated the anterior chamber. He always used capsule forceps in preference to the cystotome. He found the results of this method so satisfactory that he had not adopted Smith's method.

Dr. A. HILL GRIFFITH (Manchester) spoke strongly in favour of the combined operation.

Dr. ANGUS MACGILLIVRAY (Dundee) spoke in favour of subconjunctival extraction, for he felt that after the operation was done the patient was quite safe. He did not like sutures, but he always did lavage and endeavoured to avoid an iridectomy where he could.

Dr. G. MONTAGU HARSTON (Hong-Kong), who had had considerable experience with the intracapsular method in China, said that if the eye were at all soft he would not attempt it, but otherwise it gave excellent results. It was absolutely necessary that a large section should be made to include at least half the cornea, and iridectomy should be done always.

Professor HAROLD GIFFORD (Omaha) thought there were many reasons why the intracapsular operation should be done in India, but he considered it unnecessary in Europe and America. He always aimed at very thorough anæsthesia, and he obtained this by the subconjunctival injection of a 4 per cent. solution of cocaine at the upper part of the eye and over the internal rectus, where he placed his fixation forceps for the purpose of counter-pressure as well as for fixing the eye. If this were done four minutes before the operation the whole procedure was painless and the iris quite anæsthetic.

Dr. MADDOX said that no reply was necessary to the discussion.

THURSDAY, JULY 30TH.

Mr. PARSONS opened a discussion on

The Hygiene of Reading and Near Vision.

He traced the development of letters from the earliest times, and showed how various modifications in letters had arisen; these were due either to desire to facilitate the ease of reading or for the purpose of beautifying the print. It was only within the last 30 years that the subject had been studied from the scientific point of view. At first letters were introduced with but little consideration of physiological requirements, but much more largely with regard to the mechanism of their production. He carefully described the way in which most of the Roman letters were made up and developed. Adolph Weber had investigated the rapidity of reading with types of different sizes, and found that if letters were more than 2 mm. in height the rate of reading diminished, and the best height was 1·5 mm. He then discussed the effect of interlineation, and the distance between letters and words and letters. The tendency of modern books was to reduce the length of lines. Cohn gave 90 mm. as the ideal length, 100 mm. as the maximum, and 30 mm. as the minimum. Williamson, of Manchester, found that of 250 school books the type was equal to a larger than Cohn's standard in 109. In 111, or 44 per cent., the type was too small. He also drew attention to the relationship of illumination to near work. Roughly speaking, the minimum illumination of the type which permitted of normal visual acuity with Snellen's test types was between 2 and 3 metre candles. Vision improved up to 10 metre candles, after which it remained almost constant up to 30 metre candles and over. A glare had less effect in diminishing visual acuity than was generally supposed to be the case, but there was no doubt that it was distressing and should be avoided. A committee of the Society of Illuminating Engineers had reported that the minimum illumination measured at any desk should not fall below 2 foot candles, but for special work, such as drawing, sewing, &c., as much as 4 ft. candles were desirable. For assembly rooms and general illumination a minimum of 5 ft. candle was recommended, or a horizontal plane of 3ft. 3 in. from the ground level.

Dr. MACGILLIVRAY thought there was a tendency at the present time to run riot on this subject. He had never seen organic trouble produced by the wearing of improper glasses.

Dr. F. W. EDRIDGE-GREEN (London) said that some physiological facts had an important bearing on the subject, and the explanation was that the centre of the retina was sensitised from the peripheral parts, and it was therefore necessary that the whole retina should be illuminated. Many persons who suffered headache after reading with a reading lamp in an otherwise dark room, or playing cards with a light over the table, lost their headaches when the whole room was lighted up.

Mr. L. A. PARRY (Hove) called attention to the large number of rooms in elementary schools which were improperly lighted. The whole or main source of light should come from the left. In most schools badly printed books had been abolished, and also fine sewing for young children.

Dr. REEVE spoke against the use of highly glazed paper, especially in books intended for the use of children.

Mr. MARSHALL said he had frequently heard people complain of electric light being tiring to the eyes. He thought that it had most of the essentials required for good lighting. It was steady and could be arranged to be of any desired brightness. He thought, however, that people used their eyes far more now electric light was in common use than they did before when they had the trouble of lighting a lamp, and so really the eyes were far more severely used. He spoke of the serious results produced by the looking into the sun or into the electric arc without proper protection, both on the retina and also on the cornea and conjunctiva.

Dr. WOOD spoke of the various suitable and unsuitable papers which were used for books, and defended the glazed variety as the only suitable one for the production of half-tone and other illustrations.

Dr. A. J. BALLANTYNE (Glasgow) said that in view of a general opinion that actual organic harm might result from glare and badly illuminated schoolrooms, the greatest caution should be exercised that no loose statements to this effect should be made which could not be proved. They might get claims made by workmen founded on such statements. A sound scientific knowledge should be arrived at which could be used as a basis on which to work.

Dr. MARION GILCHRIST (Glasgow) said that the eyes of children were taken far more care of than formerly, and she was of opinion that badly fitting spectacles were most harmful.

Dr. HARSTON thought that the more the subject was ventilated the better. In the tropics electric light was often used all day on account of the necessity of drawing blinds to keep out the sun. Many people employed in decoding messages sent by cable had the most trying work to do as regards their sight.

Mr. PARSONS, in reply, said that he considered the subject of the greatest importance, and Dr. Edridge-Green had opened up a very important point. He thought that the electric light was responsible for a great deal of discomfort to the eyes, and it was a fact that all the recent illuminants made use of the violet end of the spectrum far more than the red end, as was illustrated by metallic filament lamps and incandescent gas mantles.

Dr. A. MAITLAND RAMSAY (Glasgow) opened a discussion on

The Teaching of Ophthalmology to Medical Students.

He said that in the Scottish medical schools the teaching of ophthalmology was compulsory, but the number of hours devoted to it was entirely inadequate, and with the exception of the University of St. Andrews no examination in the subject was held. Very occasionally an eye question was set in the medical or surgical papers, but the lecturers in ophthalmology took no part in the examination. This contrasted badly with the arrangement in Ireland, continental Europe, and many of the schools in America, in which it formed an important part of the final examinations. So many subjects were compulsory that unless an examination was held on a particular subject but little work would be done by the students in that subject. Ophthalmology should not be looked upon as a special subject, but should form an integral part of medicine and surgery. Country practitioners would frequently be called upon to treat eye cases, and some guarantee was necessary that they would be capable of

recognising the ordinary eye diseases. The aim of teaching should be to put the student in the possession of these essential facts. He should be taught how to conduct an examination on so important an organ as the eye. He should know how to investigate a refraction case, even if he did not know much about the treatment of it.

Mr. M. L. HEPBURN (London) detailed the methods adopted for teaching students at Moorfields. He deprecated set lectures, but strongly advocated practical clinical instruction.

Miss E. M. MAXWELL (Dublin) stated what was the practice in Trinity College.

Dr. HARSTON said that the new University in Hong-Kong had appointed him to be professor of ophthalmology, and much attention was paid to the subject.

Dr. GRIFFITH, Mr. A. F. MACCALLAN (Cairo), Dr. REEVES, Dr. WOOD, and Mr. PARSONS all spoke to the various practices of the universities and colleges with which they were connected.

Mr. BICKERTON proposed the following resolution:—

That the members of the Section of Ophthalmology recommend to the Council of the British Medical Association that not only should a course of ophthalmology be compulsory, but that every student should pass an examination in the subject before he obtained his qualification to practise.

This was seconded by Dr. MACGILLIVRAY and carried unanimously.

Dr. RAMSAY gave a demonstration with the epidiascope of coloured photographs showing certain Eye Diseases.

FRIDAY, JULY 31ST.

Dr. GRIFFITH read a short paper on

A Case of Late Infection following Elliot's Operation for Glaucoma.

He said that he did his first trephining for primary glaucoma in January, 1911, and had done in all 125 cases, besides a good many for secondary glaucoma and for other diseases. He was well pleased with the results of the operation. He, however, had had the case of a man, aged 55 years, on whom he did the operation for chronic glaucoma in both eyes. The vision in both eyes was 6/18, and they were both in about the same state of the disease. Both were operated upon. A year later the patient was seen with purulent iridocyclitis in the left eye with tension – 3, exudation in the pupil, and severe injection. The eye was removed three days later. The attack had commenced four days before he had come up for examination. The right eye was satisfactory in every way. He had found 30 recorded cases, including his own, of such late infections, but he thought this must represent only a very small proportion of the total number of eyes operated upon. His confidence in the operation had been shaken, and he felt it his duty to publish the case.

Mr. MARSHALL thought that all eyes in which there existed a cystoid scar were liable to develop iridocyclitis from slight conjunctival infections. He mentioned the case of a lady who was operated upon for double glaucoma in 1887. Iridectomy was done and the case did well. A year later, however, a catarrhal conjunctivitis developed and one eye was lost in exactly the same way as in Dr. Griffith's case.

Professor GIFFORD quite agreed that all cases in which the fistula existed were dangerous, and as a precaution against conjunctival infection he made it a routine practice to insist on such patients washing out the eye once or twice a day with an antiseptic solution.

Mr. PARSONS was surprised that later infections did not occur more frequently than they did. He advocated a very large conjunctival flap and the trephining well forward into the cornea as described by Elliot.

Dr. HARSTON advised the careful examination of all accessory sinuses in these cases for fear of a latent infection therein.

Dr. BALLANTYNE thought the conjunctival flap should be cut as thick as possible.

Dr. WOOD had seen two cases of infection after trephining. One occurred three weeks after the operation and the other six months after.

Dr. RAMSAY thought it most important not to cut the conjunctival flap down to the periphery at its extremities.

Dr. JAMES A. WILSON (Glasgow) thought a thin flap was always dangerous; it should be cut as thick as possible.

Mr. BICKERTON and the PRESIDENT both said that they had seen no case of late infection following trephining.

Dr. GRIFFITH replied that infection did not come about from the extremities of the flap, but through the bleb over the trephine opening itself.

Dr. EDRIDGE-GREEN read a paper on

An Analysis of the Results of the New Sight Tests of the Board of Trade.

He took the published reports of the Board of Trade and carefully drew attention to the facts these brought out. The tests now in use consist of an improved wool test in which five test colours were used, and also a special lantern introduced by the Board of Trade. Of the 286 definite rejections in the local examinations 148 failed in both the lantern and wool tests, and 138 failed in the lantern test only; there was no failure with the wool test which passed the lantern. Of the 286 failures 93 appealed, 26 successfully. Of 125 referred cases 20 were referred on both the lantern and the wool tests, and one on form vision as well. Of this number there were 30 failures; 3 of these were referred on both lantern and wool test, 26 on the lantern only, and 1 on form vision as well. Those referred on the wool test only were passed. These figures did not quite agree with those in the report, which was inaccurate. The results were not tabulated, so that it made it quite difficult to arrive at these figures. If they were, it would settle once for all the question of the efficiency of the wool test even in its improved form. There was no failure with the wool test which passed the lantern. 52 per cent. of the rejected candidates were able to pass this wool test. The wool test as now used was infinitely superior to the form as originally advocated by Holmgren, and yet even so this huge percentage of dangerous cases were able to pass it. He then adversely criticised the lantern as used by the Board of Trade, and pointed out that it almost exactly resembled a discarded pattern of his own.

Mr. PARSONS defended the Board of Trade tests, but admitted the subject was a very difficult one.

Mr. MARSHALL commented on the inadequacy of the Board of Trade tests and the very bad results they got by their own showing. He was glad that Mr. Parsons thought the subject a difficult one, and it was therefore the more incomprehensible that the Board of Trade should justify the employment of ignorant examiners who admittedly knew nothing about eyesight or of eye tests. Under these circumstances he was not surprised to see the bad results recorded officially in this report.

Major MCKECHNIE said that in his opinion the Edridge-Green lantern was the most scientific and the best test there was for colour vision. If the lantern detected all the dangerous cases, and the wools only a few of them, he could see not the smallest justification for the retention of the wool test at all. He thought that a definite standard should be settled upon, and that possibly the Admiralty could help in this respect.

Dr. EDRIDGE-GREEN replied.

Dr. WILSON read a paper on

The Factor of Heredity in Myopia.

On the evidence of 1500 cases he concluded that there was a hereditary factor in no less than 58 per cent. As evidence of hereditary myopia he took the fact of myopia in one parent or brother or sister; or "statements that a parent or relative could see to read, write, or sew without glasses at or over 60 years; habitually passed friends in the street, yet had good near vision; glasses were removed for reading; when reading held paper close to the face." In children he found the sexes unequally affected; the difference increased with age, giving a ratio of 2 females to 1 male—a ratio suggesting sex limitation. The incidence of myopia bore a direct relationship to the amount in the parentage or extraction and there was order in the transmission. There was similar evidence of heredity in high degrees and in low degrees of myopia. No special association with occupation was found and the innate characters indicated independence of environment.

Mr. N. BISHOP HARMAN (London) presented a paper on

The Causes of Blindness in 1100 Children, with Special Reference to the Influence of Venereal Disease.

These children he had seen over a period of ten years, and all of them had been examined many times, and in most

cases their parents had been seen also. There was therefore exceptional facility for making accurate diagnoses of the original cause of the blindness. Of the 1100 children no fewer than 58 per cent. owed their pitiable condition to affections produced by venereal disease. Of the total, 24 per cent. were blinded by ophthalmia neonatorum; the remaining 34 per cent. (with an exception to be noted) were blind or partially blind from conditions directly produced by or associated with inherited syphilis. The exceptions were two cases of children who had lost their sight from gonorrhœal conjunctivitis contracted from infants affected with ophthalmia neonatorum. In the syphilitic groups it was of interest to note that children suffering from interstitial keratitis presented positive evidence of syphilis as the primary factor in no less than 90 per cent. The positive evidence was less in the inflammatory states within the globe, such as disseminated choroiditis, but in these there was an unusually high incidence of mental defect of serious order, often amounting to insanity. The high incidence of venereal disease as the primary cause of blindness in children was an indication for activity in checking the spread and for the provision of more effective treatment of these diseases.

THE ANNUAL EXHIBITION.

(*Concluded from p. 400.*)

III.—SPECIAL FOODS.

The special food section of the exhibition presented few novelties. Most of the specimens shown were well known, although it may be admitted that in several instances their merits are a sufficient reason for keeping them prominently to the front. The preparation known as virol, for example (Virol, Limited, 152–166, Old-street, London, E.C.), has now had the test of clinical experience thrown upon it for a number of years, and the reports are satisfactory. From its composition it is safe to conclude that it contains both lecithin and the vitamines. It consists, as we have pointed out in our analytical columns, of bone marrow, red bone marrow, malt extract, eggs, and lemon syrup. It is employed with success in wasting diseases and in cases of malnutrition in infants. Messrs. Brand and Co., Limited (Mayfair Works, South Lambeth-road, Vauxhall, London, S.W.), exhibited a number of "essences" of beef, chicken, and mutton, which have established a reputation for invalid use. Besides these there was a meat juice containing meat albumin to the extent of 5 per cent., the preservation of this important nutritive meat principle in the uncoagulated state being secured by a special process which avoids reaching the temperature at which albumin coagulates. The Horlick's Malted Milk Company (Slough, Bucks) showed specimens of their malted milk in the form of powder and tablet. In the process of manufacture extracts of malted barley and wheat are evaporated with milk to dryness. The enzymes of the cereal extracts appear to modify the casein so that it does not coagulate in clots on the addition of acids as might take place in the stomach. The Liebig's Extract of Meat Company, Limited (Thames House, Queen-street, London, E.C.), exhibited their well-known meat preparations, lemco, a pure extract, and oxo, which is extract to which beef fibrin has been added. There was also a special preparation called hospital oxo, which has received an addition of peptonised beef. Close by was the stall of the Nestlé and Anglo-Swiss Condensed Milk Company (6 and 8, Eastcheap, London, E.C.). Their condensed milk contains the whole of the milk fat. They also exhibited specimens of full cream milk sterilised. Messrs. Bovril, Limited (152–166, Old-street, London, E.C.), presented to view a number of meat preparations, including their well-known bovril, which in addition to extractives contains meat albumin and fibrin, and invalid bovril intended for hospital use containing a high proportion of albuminous principles derived from beef. Messrs. Callard and Co. (74, Regent-street, London, W.) exhibited a number of starchless and sugarless foods intended chiefly for the use of the diabetic. These included sugarless and starchless breads, biscuits, and cakes, marmalades, jams, and beverages, free also from sugar. Among the exhibits of Messrs. Keen, Robinson, and Co., Limited, incorporated with Messrs. J. and J. Colman, of London and Norwich (Denmark-street, St. George's-street, London, E.), was a "patent" barley, which is specially adapted for the preparation of barley water as a beverage or for diluting milk for infants' use. There were also shown specimens of Colman's medical mustard bran for poultices and Colman's concentrated mustard oil for the treatment of rheumatism. Cocoa products, cocoa and chocolate, formed the feature of Messrs. Cadbury's exhibit. The demonstration served to show the care taken to exclude any foreign additions to the ultimate product.

IV.—SANITARY APPLIANCES.

This section included only two exhibits. The germicide cyllin in various forms was shown by the Jeyes Sanitary Compounds Company, Limited (64, Cannon-street, London, E.C.), and examples of sanitarily polished floors were furnished by Ronuk, Limited (16, South Molton-street, London, W.). The Jeyes Sanitary Compound Company included in their exhibit, besides the special preparation of cyllin for medical purposes, cyllin gauze free from fatty matters, cyllin obstetrical lubricant and lano-cyllin used in skin diseases. Ronuk, Limited, exhibited, besides the ordinary ronuk for polishing purposes, a liquid polish which is admirably adapted for polishing the furniture of the hospital ward.

V.—MINERAL WATERS AND BEVERAGES.

Interest in this section lay chiefly in the demonstrations given of the advantages of the two watering places Buxton and Droitwich. At the Buxton stall there were samples of Buxton thermal radio-active water. A carefully compiled book, advancing the claims of Buxton water based on ionic activity combined with radio-activity in the treatment of gout, rheumatism, and general disorders of metabolism, was distributed. Droitwich claims to possess the strongest brine waters known, and here again evidence was brought forward of the value of treatment chiefly in chronic rheumatism at this sheltered health resort. Claims were made also in favour of the radio-activity of these strong saline waters.

Messrs. Ingram and Royle (Bangor Wharf, 45, Belvedere-road, London, S.E.) exhibited a number of specimens of mineral waters drawn chiefly from well-known springs on the continent. The supply of many of these waters will naturally be affected by the war. There were thus represented the Carlsbad water, Contrexéville water, Evian-Cachat, Selters, Vichy, and so on. The exhibit included samples of natural Carlsbad sprudel salt. Friedrichshall water, containing approximately equal amounts of the sulphates and chlorides of magnesium and sodium, was presented by Messrs. C. Oppel and Co. (10 and 12, Milton-street, London, E.C.). It is correctly described as a mild natural aperient mineral water. The stall of the Apollinaris Company (4, Stratford-place, Oxford-street, London, W.) was occupied chiefly with bottles of their well-known natural mineral water, which is drawn from the warm springs at Neuenahr. This water is a powerful antacid owing to the presence of natural alkaline carbonates. There were besides specimens of Apenta water, known for its constancy of composition and its regularity of action as a saline aperient.

Messrs. Gaymer exhibited specimens of their cyder produced at Attleborough, Norfolk, which through its general excellence has rapidly gained favour as a healthful beverage. As is well known, the salts of cyder (chiefly malates of potassium) on metabolism produce alkaline carbonates, and some attach importance to this fact in connexion with the impression that cyder is a useful beverage for gouty people.

VI.—MEDICAL PUBLICATIONS.

There was a fair representation of medical publishers and the opportunity of inspecting recent publications on medical and surgical subjects was obviously welcomed by the visitors. Amongst those who had stalls were the following: The British Branch of the International Abolitionist Federation (books and pamphlets dealing with prostitution and the prophylaxis of venereal diseases); Messrs. John Wright and Son, Limited (Bristol); Messrs. William Heinemann (21, Bedford-street, London, W.C.); Messrs. E. A. Brooke-Williams (8, Henrietta-street, Covent Garden, London, W.C.); Messrs. D. Appleton and Company (25, Bedford-street, London, W.C.); The Oxford Medical Publications (Mr. Henry Frowde, Oxford University Press, and Messrs. Hodder and Stoughton, 20, Warwick-square, London, E.C.); Mr. H. K. Lewis (136, Gower-street, London, W.C.); and lastly The W. B. Saunders Company (9, Henrietta-street, Covent Garden, London, W.C.).

THE LANCET.

LONDON: SATURDAY, AUGUST 15, 1914.

The Medical Profession and the War.

As is well known, the Navy, including the Naval Medical Service, was completely mobilised before the declaration of war by Great Britain, and the medical officers of the Royal Naval Volunteer Reserve were called up from their civilian duties to take their places as naval surgeons. Further, in our last issue we published the announcement that surgeons for temporary service in the Royal Navy were required, while a certain number of senior students to act as dressers under the title of surgeon probationers in the Royal Naval Volunteer Reserve were also invited to make application for service. We learn from the Medical Director-General of the Navy that these announcements at once produced an adequate response, and from the large array of applicants a number sufficient for present needs have been accepted, while from the reserve of trained nurses organised by the matrons of the large hospitals a suitable quantity has been called up and drafted to the naval base hospitals. We are in a position to say that the medical service of the Royal Navy is fully prepared at every point to carry out the duties which will fall to its lot. Senior members of large general hospitals, including expert anæsthetists, are standing by for immediate duty at the various naval base hospitals to which the sick and wounded will be landed by means of the Admiralty hospital ships, and an ample provision of beds is already available for the reception of convalescent seamen. At the present moment there is happily no need for additional convalescent equipment, but many offers have been received at the Admiralty from private citizens, and these are being noted and sorted by the medical department of the Navy, who recognise that such accommodation may prove of the greatest value. In this connexion we might point out that a widespread fallacy exists in the public mind as to the use and purpose of hospital ships. The idea seems current that these are of the nature of floating hospitals anchored at some convenient spot off the sea coast or in harbour, in which sailors recover from wounds and sickness. On the contrary, of course, in hospital ships no wounded or sick are kept a moment longer than is absolutely necessary. Such means of transport would almost better be described as ambulance ships. No one can foretell how long the war will last, but we may repeat that for the time being the medical service at sea and in port is efficient and sufficient, while provision is being taken for the future. If further help in any direction is sought it will be our privilege to announce the kind and extent of the need, and to support the medical departments of both services of the Crown to the utmost of our power.

The embodiment of the Territorial Force which took place last week has already drawn considerable numbers of medical men from civilian practice into active military service. The Territorial Force Medical Service consists of 14 mounted brigade field ambulances and 42 field ambulances, together with the Sanitary Service and the 23 general hospitals, whose *à la suite* medical and surgical staffs become available on mobilisation. We published in our Services column last week an invitation to civilian medical practitioners desiring to serve at home or abroad as temporary surgeons with the army to apply to the Secretary of the War Office, together with the conditions under which such appointments would be made. We learn now from the Director-General of the Army Medical Service that the response to this invitation has been excellent, and that applications have continued to pour in to the Medical Department of the War Office during the days which have passed since its publication. Immediate requirements are now more than satisfied, but additional offers of service may be made and will be dealt with as future occasion demands. We are also authorised to state that the medical equipment of the Expeditionary and Territorial Forces have never been in a higher state of efficiency, and that all the arrangements are perfectly in order for the medical treatment and nursing of the wounded and sick. Everything which organisation and foresight can suggest has been carried out promptly and efficiently, and the public and the medical profession may feel entire confidence on this score. Generous offers from private citizens for the accommodation of invalid combatants have also poured into the War Office, but we are asked to say that all such offers of voluntary aid should be submitted, in the first place, to the British Red Cross Society, Devonshire House, Piccadilly, London, W. This society has undertaken the task of preliminary coördination for the Director-General of the Army Medical Service, who will thus be able to call for help from time to time as circumstances dictate. On all sides the general hospitals of the country are sparing as much as possible of their personnel that the defence of the country may be perfected in all its branches. It is recognised by everybody that the ordinary charitable institutions must not be depleted below a certain line. The line can be drawn far down by the willingness of everyone to work without thought of time or labour, but the general hospitals may be called upon to fulfil even more than their ordinary functions, and this must be remembered.

The huge amount of quiet work in the shape of voluntary aid which has been done all over the

country for the last three years is now to be tested. The gap in the nursing and medical department of the Territorial Army is to be filled by Voluntary Aid Detachments, men and women, but it is the construction of the latter that we wish to indicate here. To take a typical county, say Kent, upon whom the first brunt of duty will probably fall, we find scattered all over the area, even in quite small towns, sections, 50 in number, consisting each of one lady commandant, one quartermaster (superintendent of stores), one lady superintendent, who must be a trained nurse, and 20 women (four of whom must be qualified cooks); a medical officer may or may not be attached to each detachment. All these women must hold a certificate in first aid, and a further certificate in nursing, as issued either by the Red Cross Society or by the St. John Ambulance Association or certain other bodies approved by the War Office. The local control of these detachments is vested either in the Territorial Association of the county or in one of the bodies mentioned above, usually at the discretion of the Territorial Association. In either case the detachments have been periodically inspected by the Royal Army Medical Corps authorities, and the dispositions made for the reception of wounded have been similarly examined and approved. The War Office has also scheduled the equipment which must be furnished for temporary hospitals. Each detachment has retained certain buildings, usually schools, public halls, club-rooms at inns, and other large rooms, where domestic offices of some sort are attached or can be improvised. These have been arranged either to form clearing hospitals and larger rest stations dealing with up to 200 sick and wounded, or entraining and smaller rest stations for 50 cases for the night. The concentration of cases is not always easy to arrange, on account of the lack of suitable large buildings, but in some instances it is being done. One detachment in Kent is fortunate enough to have been given the loan of a large empty mansion capable of accommodating 70 cases, and a very little adaptation is bringing the bath and lavatory accommodation to the requisite level. In the same town there is an adjacent building capable of receiving 50 beds, and the schools and public hall are still available. But the actual beds, linen, and much of the furniture have been promised on loan by the inhabitants, and carefully listed and inspected by the quartermasters. In many small places the difficulty is not the buildings but the equipment. If the nurses are insufficient in one area of the country, arrangements are being made to obtain the surplus from other areas. Near main lines and railway junctions preference has been given to providing rest stations for preparing and serving meals and refreshments to sick and wounded during transit by railway, and the women's detachments are to take charge, in the evacuation stations or temporary hospitals, of such severe cases as are unable to continue the journey. Returns have not yet been made as to the number of Voluntary Aid Detachments which are in working order, but it is believed that over 50,000 men and women detachments have been enrolled and at work months ago, a number which ought to be a very useful supplement to that of the trained nurses available for military work in England. While we may congratulate the women of England, drawn from all classes, who have thus devoted themselves to patriotic duty, it is impossible, on reading the official accounts of similar bodies in Germany, Austria, and France, to avoid the conclusion that a higher standard of efficiency is demanded on the continent; but the public in this country has not hitherto been generous to the Voluntary Aid Detachments.

Prescribing of Narcotic Drugs.

BY the terms of the International Opium Convention new regulations will have to be introduced in Great Britain to prevent the illicit distribution of opium, morphine, and cocaine. In several continental countries this question has been regulated for a considerable period, whereas in England the sale of these drugs will have to be placed on an entirely new basis. At present the retail sale of these narcotic drugs is confined solely to registered pharmacists who are required to observe certain formalities, such as entering the sale in the poison book and labelling the poison with the name of the article, the word "Poison," and the name and address of the seller. Otherwise, beyond the observance of these mere formalities, there are no restrictions on the sale of any of the scheduled poisons. With regard to poisons dispensed as a prescription, there are no legal safeguards against the unlimited repetition of a medicine consisting wholly or in part of potent drugs, and the prescriber has no authority to prevent the abuse. In continental countries the position is totally different. These potent drugs, capable of medicinal application only, are placed in a category by themselves and withdrawn from ordinary commerce. Not only is their sale restricted to registered pharmacists, as is the case in Great Britain, but to prevent their indiscriminate use by the public they may be sold only on a medical practitioner's prescription, thus ensuring their use under professional control. In Great Britain a proprietary preparation may contain a potent drug, and provided that the provisions of the Pharmacy and Poisons Act are observed it may be freely sold, whereas abroad the same preparation is obtainable only on presentation of a qualified doctor's prescription. Nor do the safeguards taken end here. In most countries the repetition of a prescription calling for a potent drug is either forbidden or subject to certain restrictions, so that the owner of the prescription is unable to obtain a further supply of the medicine without the concurrence of a practitioner. It will be seen that to comply with the terms of the International Opium Convention the sale of these potent drugs will have

to be placed on an entirely new basis—from being treated as articles of commerce, the sale of which is surrounded by certain formalities, they must become medicinal agents which can be obtained only on a prescription, and even then this document will not confer the right to obtain an unlimited supply of the medicine, for its repetition will be at the discretion of a medical practitioner.

The question now arises, What steps must be taken in Great Britain to give effect to the terms of the Convention? As the pharmacist is already the sole legal vendor of poisons the simplest course would be for the Government to frame new regulations for the sale of these narcotic drugs in accordance with the spirit of the terms of the International Opium Conference and enforce their observation by all pharmacists, since the latter are the persons through whom the public obtains these drugs. In illustration of the application of the restrictions to be placed on the sale of narcotic drugs in this country the regulations in force abroad may be briefly reviewed. In the first place, none of these drugs—in most countries a large number of other potent drugs are also included—may be sold except on presentation of a qualified medical practitioner's prescription (or of a dental surgeon, or veterinary surgeon in respect of drugs for animals only), so that interest centres chiefly around the regulations dealing with the repetition of such prescriptions. In Italy the pharmacist is compelled to keep all prescriptions for poisons, thus effectively preventing their repetition, as a copy of an original prescription cannot be filled unless signed by a doctor. The new Norwegian pharmacy law prohibits the repetition of a prescription calling for certain potent drugs, unless the doctor distinctly states on the prescription that it may be repeated, indicating also the number of times, but the validity of the prescription expires at the end of a year. It may be mentioned in this connexion that in most European countries the doctor is required to sign his name in full on a prescription and also write out the patient's name, and in Austria the latter's address. The German regulations are still more elaborate. In the first place, there is a list of 161 potent drugs, none of which may be dispensed except upon presentation of a prescription. This list includes, *inter alia*, such substances as acetanilid, calomel, sodium salicylate, and phenacetin, which are not even scheduled poisons in Great Britain. As regards the repetition of prescriptions, no medicine intended for internal use, inhalation, hypodermic injection, or eye lotions, enemata or suppositories, may be repeated, unless signed and dated on each occasion by a medical man, if it contains any of the following drugs: chloral hydrate; chloral formamide; morphine, heroin, cocaine, or their salts; preparations of ethylene; amylene hydrate; paraldehyde; sulphonal; trional; urethane; and veronal. A slight concession is made in favour of medicines containing small quantities of morphine or heroin. A medicine containing altogether not more than ½ grain of morphine or one of its salts, or ¼ grain of heroin, may be repeated without the renewed signature of the doctor, provided that the morphine or heroin is present merely as an adjuvant to other drugs, and is not itself the principal therapeutic agent. As regards the repetition of prescriptions containing any other of the 161 drugs specifically mentioned, this is automatically regulated by the provision of a maximum repetition dose for each drug.

We now come to another important safeguard which is absent in Great Britain. In Germany and in many other continental countries the doctor may write on a prescription a remark to the effect that it is not to be repeated, or may fix the number of repetitions and the period during which the medicine may be repeated. These directions are legally binding on the pharmacist; of course, they apply only to those drugs the sale of which is subject to restrictions—viz., potent drugs. The objection has been raised that legislation requiring the renewed signature of a doctor prior to repeating a prescription imposes a heavy financial burden on the patient, who is thus compelled to pay the doctor's fee each time, quite overlooking the fact that this safeguard is provided in the patient's interest. To bring conditions in Great Britain into line with those abroad, and thus give effect to the terms of the Convention, regulations will have to be introduced forbidding the sale of certain potent drugs except on a qualified practitioner's prescription, which will have to be signed with the prescriber's name and not simply initialled—in most continental countries the doctor's name is printed as a heading on his prescription blanks. The repetition of such prescriptions will have to be forbidden unless enforced on each occasion with the renewed date and signature of a medical man; or the prescriber may indicate on the prescription that it may be repeated a certain number of times within a specified period, while on making the medicine up the pharmacist would affix his stamp, with the date, each time to prevent the patient from having it repeated over the specified number of times. The powerful patent medicine interests will insist that a minimum amount of morphine should be permitted as an admixture to other drugs, the amount to be stated on the label, and the Government, having regard to the profits of the revenue, will be disposed to look favourably upon such a proposal.

TUNBRIDGE WELLS GENERAL HOSPITAL.—A new escape staircase completing an elaborate system of fire apparatus at the Tunbridge Wells General Hospital was opened by the mayor (Councillor C. W. Emson) in the presence of an influential gathering of townspeople on July 20th. Opportunity was afforded of a visit of inspection of the various departments and wards, and demonstrations were given in the radium and X ray laboratories.

Annotations.

"Ne quid nimis."

IS PELLAGRA A DEFICIENCY DISEASE?

THE incidence of pellagra is undoubtedly increasing in some parts of the world, in the southern part of the United States, for example, but unfortunately the etiology of the disease remains, so far, undetermined. Much time and labour have been spent in researches on this malady, and especially in attempts to discover its specific parasite, all equally unavailing. The attention of some investigators has lately been directed to the question whether, after all, pellagra may not properly be classed among the so-called deficiency diseases. One of the foremost exponents of this view is Captain Edward B. Vedder, of the Medical Corps of the United States Army, who is well known by his work on experimental beri-beri in the Philippine Islands, and who not long ago explained his opinions regarding beriberi and pellagra in the *American Journal of Tropical Diseases*. It is suggested that the increased incidence of pellagra in the United States coincides with the introduction of modern methods of milling maize and other cereals, the new process depriving the grain of the vitamines contained in its superficial layers. If pellagra is a deficiency disease its relation to maize is similar to that of beri-beri to rice. The consumption of maize itself is not injurious, but when it or other cereals under modern methods of preparation are too exclusively used a deficiency arises of some unknown substance, or vitamine, necessary for metabolism; when the whole grain is used this deficiency does not arise. Pellagra may originate from other articles of diet, apart from maize, when they do not contain a sufficiency of the pellagra vitamine. Decorticated maize as a staple article of diet is likely to cause pellagra just as the consumption of over-milled rice for any length of time will give rise to beriberi. There are reasons for believing that a too exclusive diet of canned food, in which the vitamines have been altered or destroyed in the course of preparation, is liable to cause or at least to assist in causing diseases of the deficiency class. Another champion who has entered the lists in favour of the deficiency theory of the origin of pellagra is Surgeon Joseph Goldberger, of the United States Public Health Service, who has quite lately set out his views on the subject in the official journal, *Public Health Reports*, calling attention specially to certain epidemiological observations, the significance of which has not yet, he thinks, received the attention which it deserves. He brings forward a number of reports and details of gaols, asylums, and other public institutions in which pellegra has attacked the inmates, but leaving untouched the nurses, attendants, and other employees living under precisely the same conditions and often in close association with those who were attacked. In some instances the disease developed after 10 or even 20 years' residence in the institution. If pellagra be a communicable disease these facts are difficult of explanation; neither "contact" in any sense, or yet insect-transmission of the virus, explains the different incidence in the two classes. Dr. Goldberger seeks an explanation in a difference in the diets. It is true that in some establishments the staff and inmates have separate dietaries, but in other institutions the diets of both groups are nominally the same. But closer inquiry shows in the latter that there is a difference also, for the employees have the privilege, which they invariably exercise, of selecting the best and greatest variety of food for themselves; moreover, they have opportunities, which are denied to the inmates, of supplementing the institutional dietary from various sources. It is now generally recognised that pellagra is often associated with poverty and poor living, and that the disease more frequently occurs in rural districts than in towns. There is plenty of poverty in cities, but pellagra does not manifest itself in such places. This exemption is explained again by differences in diet. Studies of rural and urban dietaries have been officially made in some parts of the United States, and it is thereby shown that on the whole the poorer classes in the cities have a more varied diet than the same kind of people living in rural areas. One report states that "except in extreme cases the city poor appear to be better nourished than the mountaineers" (of Tennessee). Examination of some institutional dietaries reveals a higher proportion of cereals and vegetables than is found in the food of the comfortably off classes. Though the consumption of maize and its products is not essential for the origin of pellagra, this does not mean that maize and its products, however nutritious and however high in caloric value they may be, are not objectionable when forming by themselves, or in combination with other cereals, a large part of the usual diet of individuals. Dr. Golberger urges that, pending the settlement of the precise causation of pellagra, efforts should be made to prevent the occurrence of the disease in institutions by improving the dietary, reducing the amount of cereals, vegetables, and canned foods so largely used in the United States; and that an increase should be made in the amount of fresh animal food, including fresh meat, eggs, and milk. The origin of pellagra is being examined at present in various countries by commissions, committees, and private investigators; in addition, we learn from Dr. Goldberger that "intensive studies" along the lines above indicated are being conducted by experts belonging to the United States Public Health Service. These combined researches attacking the problem from different points must, we think, succeed before long in throwing light upon the etiology of pellagra. Meanwhile, the views put forward by Captain Vedder, Surgeon Goldberger, and others seem to deserve careful consideration by all who are engaged in studying this important but puzzling malady.

DEAFNESS IN AMSTERDAM SCHOOL CHILDREN.

K. van der Wal[1] has investigated the hearing of 7433 school children in Amsterdam, testing them with the whispering voice normally audible with each ear separately at a distance of 6 metres; over 89 per cent. of the children passed this test satisfactorily. Nearly 5 per cent. of the children were more or less deaf in one ear, nearly 6 per cent. in both ears; and in the latter class, which contained 441 children, 200 could not hear the whispering voice at 3 metres, and 69 failed at 1 metre. 802 children showed some degree of deafness on one or both sides; in their 1604 ears the deafness seemed due to cerumen in 263 ears, to disease or indrawing of the drum in 952, and

[1] Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam, 1914, 697.

to otitis media in 161. Examination of the naso pharynx in 698 of these 802 children proved that 375 of them had adenoid vegetations. The cause of the deafness, in fact, almost always lay in the sound-conducting apparatus of the ear; in only 10 children was it due to any lesion of the nervous apparatus of hearing. Van der Wal compares the results of his examination with the details as to deafness furnished by the teachers of the children. The teachers estimated 494 of all the children to be hard of hearing; he found that 233 were more or less deaf, while 261 had normal hearing, and he points out that the deafness of 569 children had passed unnoticed by their teachers, and that only 62 out of 140 children who could hear the whispering voice at less than 2 metres were noted as deaf, and only 36 out of 69 who could not hear the whispering voice at 1 metre. He next compares the intelligence of the children with their ability to hear. Out of 5632 set down by their teachers as intelligent 9·4 per cent. were more or less deaf; out of 1641 said to be moderately intelligent or stupid 231 showed deafness, or 14·1 per cent.; out of 160 said to be backward 41 were deaf, or 25·6 per cent. Out of 6631 children with normal hearing 1529 were said to be stupid or backward, 23 per cent.; of 802 more or less deaf children 272 were set down as stupid or backward, 34 per cent.; of the 42 who could not hear the whispering voice at ½ metre distance 22 were said to be stupid or backward, and the teachers were unaware of the deafness in 7 of these 22. As a result of these investigations 214 of the deaf children received treatment at an aural polyclinic, and van der Wal investigated their hearing again after the treatment. Great improvement in the hearing followed as a rule, particularly when adenoids had been removed. The tabulated figures are too numerous for quotation here. The author concludes by noting that about 30 per cent. of school children are said to suffer from adenoids, and calls for the more thorough investigation and treatment of adenoids and deafness in school children.

BILATERAL SARCOMA OF THE UNDESCENDED TESTES.

THE literature of malignant diseases in undescended testes is scanty. Dr. Kenneth Bulkley, of New York, in a valuable paper published in Vol. XVII. of *Surgery, Obstetrics, and Gynæcology*, stated that after an exhaustive search of the literature he had been able to find only 57 cases, to which he added two observed by himself. Sarcoma of one type or other occurred in 40 out of the 59 cases. The side affected was reported in 56 cases; in 30 it was the right, in 24 the left, and in 2 bilateral. In the *Boston Medical and Surgical Journal* of May 28th Dr. Oliver C. Smith has reported another bilateral case. After a careful search of the "Surgeon-General's Catalogue" he could not find any other case in addition to the two mentioned by Dr. Bulkley. His patient was a married farmer, aged 38 years, who had no children. He enjoyed good health until the onset of his present trouble. In childhood both testes were absent from the scrotum, but occasionally the left could be felt in the canal. At the age of 30 he suffered from parotitis complicated by painful swellings in the inguinal canals. These entirely subsided. Two months before he came under observation he noticed an enlargement in each inguinal canal, of which the right was the larger. They grew rapidly and the right produced some pain. He was a tall, sinewy man, rather slow of comprehension, and with masculine traits not well marked. The prostate and seminal vesicles were normal to palpation. Both iliac fossæ and inguinal canals were occupied by large fluctuating tumours. The right extended above the umbilical line and was bulging. The left tumour was less tense, and through the fluid could be palpated a solid ovoid mass. Both testes were absent from the scrotum. Bilateral hydrocele, with tumour of both testes high in the inguinal canal, was diagnosed. Under ether an oblique incision was made on the right side parallel to Poupart's ligament over the centre of the tumour, and the external oblique fascia was split as in the operation for hernia. An enormous fusiform cyst of the tunica vaginalis was found, containing 750 c.c. of clear straw-coloured fluid and a hard irregular mass at the upper part. The tissues of the cord were dissected beyond the internal ring. The vas deferens was followed as far down towards the pelvis as possible and removed. A similar operation was performed on the left side, where the quantity of fluid found was half that on the right side. Primary union was obtained. The growths proved to be large round-celled sarcomata. From the statistics collected by Dr. Bulkley it appears that malignant disease of the testicle occurs 15 times as frequently in the undescended as in the scrotal testicle. Dr. Smith draws the curious inference that it is important therefore to place the undescended testicle in the scrotum during childhood, by manipulation, massage, or operation. Surely the disposition to malignant disease is connected with imperfect development of the organ and not with the mere fact of its situation.

ANENCEPHALY: SURVIVAL THREE AND THREE-QUARTER YEARS.

THIS is a unique case—that of a child which lived for nearly four years with complete absence of both cerebral hemispheres. The account of the case is by L. Edinger and B. Fischer.[1] Previous cases of this character which have been reported in the literature have, at most, only survived a few days. Life in the present example, if life it can be called, continued for three and three-quarter years. It was a long torpor, a profound type of somnolence. There was complete immobility of the skeletal structures, but in response to some forms of painful stimulus there appeared some irregular facial movements. Anything approaching the faculty of attention was never seen; the creature was never able to hold any object. At the age of two years it could cry, and pressure upon the head caused it to cease momentarily. There was absence of any signs of reflex activity with the necessary exception of the act of sucking; this was preserved and so maintained singly the necessary mechanism for the preservation of life. The necropsy showed absence of the neopallium; there was complete atrophy of the optic tracts. There was complete absence of pyramidal columns and association tracts. The case demonstrates in a striking manner the necessity for complete cortical representations, even in the earliest years, if life is to be normally fulfilled. Comparing the state of affairs in this infant with what obtains in a dog whose cerebral hemispheres have been ablated, it is found that the latter presents a relatively much greater power of recovery; a greater faculty for the lower centres to assume or partially relegate to themselves

[1] Pflüger's Archiv für gesammte Physiologie, 1913, p. 535.

functions hitherto dependent upon cortical control. There is a notable feebleness in the ability to depute function in the child. The authors came to the conclusion that the infant under these conditions has less functional aptitude than a fish or a frog deprived of its cerebrum. The account of the case is full and complete both clinically and pathologically and is well worth reading.

PAIN IN THE LEFT SHOULDER AS A SYMPTOM OF DUODENAL PERFORATION.

IN the *Maryland Medical Journal* for July Dr. A. A. Matthews has described a symptom of perforation of the duodenum which does not appear to have previously received attention—pain in the left shoulder. In four cases out of six reported by him it was a prominent symptom. He thinks it must be often present, but is overlooked in consequence of the attention being centred on the abdomen. The pain is referred to the left shoulder and not to the upper part of the left side, back, or upper part of the chest; as it often is in ulcers on the posterior surface of the stomach. The following are examples. A miller, aged 36 years, began to have slight attacks of indigestion 14 years before. He felt discomfort in the upper part of the left side of the abdomen and soreness, especially on pressure, which had been almost constant for some time. After feeling unusually well for a few days and eating a heavy meal he was seized with pain in the upper abdomen while going upstairs, so severe that he fell and rolled down the stairs. After a short time the pain appeared to be principally centred in the left shoulder. Abdominal tenderness was excruciating, and he vomited several times. Dr. Matthews saw him in consultation about 20 hours after the onset. The abdomen was much distended, the eyes were sunken, and the general condition was bad. Tenderness was too great for examination. An abdominal catastrophe, probably perforation of an ulcer, was diagnosed. On opening the abdomen through the right rectus muscle a considerable quantity of muddy fluid and a perforation "at the beginning of the pylorus" were found. The ulcer was sutured and a stab wound was made above the pubes for drainage. Recovery was complicated by pleuritic effusion, which was aspirated twice, and then became purulent, necessitating resection of a rib. In another case a man, aged 40 years, was quite well until three or four years ago, when he began to suffer from pain in the upper part of the chest. Recently food taken late at night caused considerable gastric disturbance. About two weeks before the attack he began to suffer from pain in the upper chest. He said that food would lodge in his stomach and remain there like a ball. When he awoke in the morning he felt perfectly well, but a couple of hours after breakfast he had a gnawing sensation in the stomach and occasionally vomited. He was seized with violent pain in the upper abdomen and vomited several times. Dr. Matthews saw him in consultation 40 hours after the onset. The abdomen was much distended, he vomited persistently, and had been hiccoughing for 36 hours. The first thing of which he complained to Dr. Matthews was severe pain in the left shoulder, which had been present since the onset of acute symptoms. The point of greatest tenderness was in the right upper epigastric region. A right rectus incision was made and the abdomen was found full of purulent fluid. There was a perforation on the posterior surface of the first portion of the duodenum. Convalescence was complicated by a subphrenic abscess.

Dr. Christopher Addison, M.P., has been appointed Parliamentary Secretary to the Board of Education.

IN view of the outbreak of war the publication of the new edition of the British Pharmacopœia has been indefinitely postponed.

Dr. E. Magennis has been appointed by the Apothecaries' Hall of Ireland as Representative on the General Medical Council.

GUN DEAFNESS AND ITS PREVENTION.

BY JOBSON HORNE, M.D., B.C. CANTAB.,
SURGEON TO THE METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL.

"DEAFENING" is a term which, unfortunately, when applied to a loud and sudden noise cannot be regarded to-day as a mere hyperbole of speech. It is a matter of common knowledge that constant and loud noises have an injurious effect upon the hearing. Inquiries show that a large proportion of men, such as boiler-makers and others, whose work is in the midst of noisy surroundings are liable to dulness of hearing and ultimately to become deaf. It is also known that in sportsmen deafness may originate from a similar cause. Even the shriek of a railway whistle, especially when passing through a covered station, may produce a serious deafness.

Causation and Nature of the Injuries.

At the present time we are more concerned with the injurious effects to the organ of hearing resulting from very loud noises, perhaps sudden and unexpected, such as the report of a piece of artillery, the shock and concussion of an explosion, or the firing of a cannon close to the ear. The injurious effects of the shock or of the concussion are upon the terminal portion of the nerve structures of the ear. The damage done to the internal ear may result in irremediable deafness. At times the concussion may be so severe as to cause even rupture of the drum of the ear.

Surgeon-General Suzuki, of the Imperial Japanese Navy, who, as surgeon-in-chief of the combined fleets, served on board the flagship *Mikasa* under Admiral Togo in the Russo-Japanese war, has embodied some pertinent facts in a paper read before the annual meeting of the Association of Military Surgeons, U.S.A., entitled "Notes on Experiences during the Russo-Japanese Naval War, 1904–5." In that paper he states that he received from the surgeons serving in the fleets many reports as to rupture of the tympanic membrane and concussion of the labyrinth of the ear during firing. It appears that the total number of casualties in the Japanese navy from February, 1904, to August, 1905, was 3682; of these, 1891 were killed outright and 1791 were wounded—of the latter 117 died from their wounds. One cannot help pausing to admire the excellent result of the efforts under most arduous and difficult circumstances of the Japanese surgeons and the success of Surgeon-General Suzuki's administration. The list of wounded includes 116 cases of concussion of the labyrinth and rupture and congestion of the tympanic membrane, that is approximately 7 per cent. of the wounded who survived. It therefore follows that in modern naval warfare injuries to the function of hearing which may result in irremediable deafness have to be considered. Moreover, the liability

of distressing head noises supervening on an irremediable deafness gives the matter a still stronger claim upon the most careful consideration for its prevention.

The injuries to the drum and to the nerve endings are due to the sudden condensation or rarefaction of the air in the external auditory meatus. One ear is generally more affected. The question which ear throws some light on the precautionary measures to be adopted. Among sportsmen the left ear, as a rule, is affected. As an exception to this rule, I may cite the case of a well-known shot recently under my care, in whom the right ear was affected; that was an exception that proved the rule, for he shot from the left shoulder. Owing to the way in which the head is inclined when a man shoots from the right shoulder the left ear is nearer to the muzzle of the gun, and vice versâ. In other words, it is the ear which is nearest to the muzzle that suffers first.

Preventive Measures.

Gun deafness is in a very great measure preventable. What are the precautionary measures? In the matter of field artillery, whilst the development of modern weapons of warfare has been the means of increasing the mortality, it would appear that the development has also been the means of diminishing the tendency to a lifelong misery of deafness and tinnitus. Professor Politzer, of Vienna, in the last edition of his work on Diseases of the Ear, whose opinion would be based presumably upon statistics of deafness in the Austrian army, says that the ruptures of the membrane which were formerly so frequently seen in artillery men are now scarcely ever met with since the introduction of breech-loaders. This is explained by the fact that the serving party withdraws to a distance of about 12 paces excepting one man who attends to the firing and who also stands at a considerable distance from the gun; by this means the men are protected from the action of the intense sound. This prophylactic measure is not equally applicable to the navy, but in naval firing the nearer a man is to the muzzle of the gun the greater is the risk of injury to the hearing, and the ear nearest to the muzzle is the one more liable to be damaged.

A prophylactic measure is to keep the mouth open, so as to equalise the atmospheric pressure on both sides of the drum of the ear in the external meatus and the Eustachian tube. The value of this precaution naval officers have found out, for it is not an uncommon practice amongst them to chew a toothpick whilst big guns are fired. By so doing they find that the unpleasant after-effects upon the ears are considerably minimised. A toothpick, however, does not offer sufficient resisting power to the closing of the teeth; a piece of indiarubber would be more effective. It follows from what has been said that any pre-existing obstruction to the passage of air up the Eustachian tube, whether in the tube itself or in the nose, must be removed. It also follows that when obstruction of the tube exists gun deafness is more likely to ensue.

The Use of Aural Plugs.

I now pass to the consideration of the use of plugs in the ears and of the form of plug most suitable for the purpose. At the time of the Russo-Japanese war I have some recollection of seeing the Japanese sailors represented in the press as throwing themselves full length, face downwards, on the deck with their finger-tips in their ears during the firing of guns. The drawbacks to this precautionary measure are that the finger-tips cannot be aseptic during a naval engagement, and further that every seaman does not possess the needful agility.

In the paper already cited Surgeon-General Suzuki expresses his sorrow that he did not know what was the best way to prevent these injuries to the ear, although he had given the matter the most careful attention. He goes on to say that a remedy or preventive appliance which is to be used by several thousand men must not be of a complicated nature, and he could not think of anything more effective than plugging the meatus with cotton-wool. During the period of preparation the surgeons and officers instructed the men of each division as to how to plug their ears. Sterilised cotton-wool was distributed for the purpose not only to the gunners but to the entire crews. Yet both after the battle of the Yellow Sea and after that of the Japan Sea several cases of deafness were brought to the surgeons. These cases he said might sometimes have been due to careless plugging of the ears, but there were some cases in which the ears had been very carefully plugged and yet deafness ensued. In the latter, of course, there might have been the pre-existing obstruction of the Eustachian tube or nose to which I have already referred.

THE LANCET of May 6th, 1911, reported in the Parliamentary Intelligence the interpellation of the First Lord of the Admiralty with reference to this subject. It was then said that the use of cotton-wool was considered by the medical profession to be of little service, and the use of a mixture of plasticine and cotton-wool by the Admiralty on board ship by officers and men was suggested, but Mr. McKenna answered the interpellation as follows: "I am aware that there are many cases of officers and men whose hearing has been impaired for the reason given without resulting in their being invalided from the navy. Tests have been carried out upon various preventives, but opinions differ very widely as to their relative efficiency. An ear paste is already prepared and is issued when demanded."

Now an efficient aural plug should conform to the following requirements. It must be close-fitting and impervious, and whilst reducing intensity of sound doses not prevent hearing; easy to insert and easy to remove intact, no part remaining in the meatus; it must be non-irritating; inexpensive, so that the same plug need not be used repeatedly; and, above all, it must be as nearly antiseptic as possible. Those in use do not comply with this last important requirement. Cotton-wool, when inserted sufficiently tightly, is not easily removed intact. Pieces left behind are liable to cause disease of the ear, and if these pieces are not removed skilfully injuries as well as disease follow. However carefully cotton-wool may be sterilised, it is an excellent medium for picking up dirt, and it does not long remain sterile when handled by men engaged in gun-firing. The ear plugs made of vulcanite, rubber, or celluloid cannot be supplied to fit exactly the peculiarities of any and every ear. Moreover, some forms of aural plugs made of vulcanite, upon being removed after being sufficiently firmly inserted, are liable to break off short, leaving a portion in the ear that is difficult to get out. An ideal plug is one that can be readily moulded to fit exactly the channel of the ear. It must be made of a substance that retains its shape without hardening or softening and remains ever plastic. What is now commonly used, and has been used

for some time for this purpose, is similar in consistency to jeweller's wax. For obvious reasons it is important that this material should be rendered antiseptic. And I have no doubt that it will be possible to produce a plug conforming to all the requirements that I have mentioned.

Even in time of peace during gun practice complete asepsis is a matter which is difficult to obtain on board a war ship, and during an engagement it is ten times more difficult, the firing of guns, the hastening to and fro of the men, and a thousand other things must charge the air with dust and particles of matter. The precautionary measure of plugging the ear with a substance that not only breaks the concussion caused by the firing, but also through its antiseptic properties safeguards the ear against infection, serves a double purpose. In the case of a ruptured drum the presence in the meatus of a plug such as I have described, even should it not have been sufficient to prevent the injurious effects of the concussion, would assist in preventing the deplorable consequences of suppurative disease of the ear requiring surgical intervention.

THE WAR.

FOOD RESOURCES IN TIME OF WAR.

WHILST happily there are official assurances that there will be no serious curtailment of the food supplies of this country, it is an opportune moment for considering, in the event of a shortage happening, the possible directions in which this supply could be augmented. In any case it would be foolish not to husband our resources, and the wise housekeeper will commence forthwith to economise and to provide only what is necessary for sustenance. At a time like the present the palate and the appetite may well be subordinated to mere physiological needs. It is not at all improbable that the menace of a shortage of food supplies, shown by prices, will inculcate a very profitable lesson in regard to domestic ways and means, and attention may well be drawn to the economical handling of the common commodities. Waste at all times is unjustifiable, and in a critical period wanton and wicked. There should be no contempt for hashes and stews, and a serious effort should be made to extract every unit of nourishment out of the various articles of food which form our daily bill of fare. Simplicity in diet is all in favour of the healthy working of the human machine, and an enforced adoption of this principle in practice is calculated to do good rather than harm. Fortunately, also, simplicity in diet does not necessarily connote a monotonous régime, for after all there is a wide range of simple things which are available for the purposes of food.

Nothing simpler, for example, could be proposed than a diet of bread, butter, and cheese, and no combination of foods presents a better physiological balance of proteins, carbohydrates, fats, and mineral substances than these three articles. They form, in fact, a complete meal, of which the only expensive constituent is the one of which least is required. We are not likely to be submitted to a shortage in the supply of flour so long as the great sources in Canada and the Argentine are open to us. We are on the edge of the harvest in England, and it is to be hoped that it will prove an abundant one; the labour involved in carrying it may be hampered by shortage of men, and it is to be hoped that some voluntary efforts may be organised to meet the case. It is of interest to add that in the great textile trades big stocks of low grade wheaten flours are kept which are employed for sizing the fabrics in conjunction with the use of "loading" materials, as, for example, china clay. Such stocks, surely, should be reserved in critical moments like the present for the higher purpose of human food. We shall probably find a shrinkage in the supply of butter or of its substitutes, but this could be usefully replaced by the homely dripping caught during the roasting of meat. The use of dripping should come fast into favour, as it is a most wholesome fatty food, probably equal if not superior to butter, and very palatable when its collection is seen to by good housewives. Cheese is prolific in nitrogen, and therefore furnishes us with tissue-forming materials.

Our fish supply may be uncertain, though confidence is expressed that in consequence of diminished exports the quantity available for home needs will be maintained. If that is so, the cheapest flesh food of all will be at our disposal, for herring, either fresh or in its preserved forms, the kipper and bloater, presents the largest amount of nutriment for a given sum of any animal food. Owing to the presence of fat the bloater is an excellent winter food, and its nitrogenous value is high. From a nutritive point of view the herring is not really inferior to salmon. Some of the simple vegetable foods, also, are rich in nitrogenous substances, as, for example, the pulses, peas, beans, and lentils, by means of which some admirable dishes may be prepared. Pease pudding, lentil soup, and haricot beans supply highly nourishing dishes not inferior in this respect to animal products. These, moreover, can be made attractive by simple resources which should be well known to cooks, though years of luxury have sadly dulled the instincts of housewives. Starches are present also in these foods, and as auxiliary supplies of carbohydrate we have the chestnut and the banana. The former deserves more attention than it has hitherto received, for a fact about the chestnut is that a given area of ground produces the maximum amount of human food when planted with chestnut trees. The peasants in central France prepare excellent dishes with chestnut as a principal feature, and it is found to supply an adequate meal sometimes twice in the day. A very plentiful source of starch is maize, the foundation of cornflour, of which there appears to be an abundant supply. It forms the basis of the blanc-mange, a food of decided calorific value and a pleasant accompaniment to stewed fruits. This is an easily prepared dish, which is why, of all the *plats* favoured by our thriftier parents, it is the one that has most commonly survived.

Coming to sugar, the substantial advance already made in the price of this commodity means that we are largely dependent upon the continent for supplies. This may lead to a brisk revival of trade with our West Indian possessions for the shipment of true cane sugar, but here again much depends upon the safety that can be guaranteed for transport by sea. Among excellent sugar substitutes there is glucose, prepared by boiling starch with acids. Glucose is undoubtedly wholesome and nutritious as well as sweet. Its use in preserves is acknowledged, and there is no physiological objection to its consumption; hence it

may usefully fill a gap in times of emergency. Sugar, as we are familiar with it now, is produced chiefly from the beet, and the process of extraction is profitable in spite of the fact that the root contains only between 12 and 15 per cent. of the crystallisable product. The suggestion to grow roots in this country has been made, but except for the potato the yield of food substance is small, while the beet needs to be cultivated upon a large scale before any substantial result is obtained.

We would here draw attention to the issue by our contemporary, the *Medical Officer*, of a very timely and useful leaflet entitled "The Best Foods to Buy During the War: the Highest Nutritive Value at the Lowest Cost," which has just been brought to our notice. This is intended for general distribution at the present moment, and sets out in simple language principles almost identical with those outlined above.

Turnips, carrots, and onions possess little nutritive value, and they contain a very large percentage of moisture. Mushrooms are probably more nutritious when carefully prepared and cooked, and in times of extremity might form a valuable and economical addition to the dietary. Their flavour is, generally speaking, much esteemed, and their cultivation might receive further attention with advantage.

Our food is still, and probably will remain for a very long time, dependent upon natural sources. Chemists have achieved many triumphs by methods of synthesis, but it has never been seriously suggested that the various foods employed in the service of man can be produced on the very large scale demanded by bringing together the elements, carbon, hydrogen, nitrogen, or oxygen, which compose them. Still, it is an interesting fact that the world's supply of these elements is extremely abundant, and theoretically we possess in water, carbonic acid, the soil, and the air the foundations of foods according to their chemical composition.

Finally, the times of extremity raise the very important question of the preservation of foods. It is obvious that if in the periods of plenty and uninterrupted supply we were able to consign part of the fresh supplies to a satisfactory process of preservation, the difficulties of meeting the exigencies of shortage when that threatens us with calamity would be reduced. If, in fact, reserves could be made preserves by a simple, cheap, and effective process applicable to all classes of foods, an immense step forward would be gained in the vital question of food supply in times of famine and of war. But that consummation implies keeping our granaries stored, and this is a highly uneconomical proceeding if based upon no plan. A plan would have to be founded upon the expectations of the future, yet who can foresee when an emergency is coming?

GOVERNMENT AND THE RELIEF OF DISTRESS.

WE are officially informed that the Local Government Board have constituted a committee, under the chairmanship of the President, to advise on measures to deal with the distress arising from war. Lord mayors, mayors, and chairmen of councils in each borough and urban district of 20,000 and upwards and in each county exclusive of those areas have been invited to establish local representative committees for distributing and coördinating relief, to be comprised of representatives of local authorities—boards of guardians, distress committees of trade unions, and philanthropic associations. The primary duty of the committees will be to survey local conditions of employment and consider measures for preventing or alleviating distress arising therefrom. Employers are called on to avert to the utmost sudden closing of works and temporarily to fill vacancies caused by mobilisation. If local industries show signs of failing, committees should at once inform the Local Government Board. The local distribution of the Prince of Wales's National Relief Fund is to be entrusted to these committees, which, in cases of acute distress, will also be charged with the coördination of local relief and the prevention of overlapping. The guardians, however, will continue to deal with persons already habitually receiving poor relief, and those boards of guardians which suspend meetings at this time of the year are requested to resume them. Guardians should supply the local relief committees with lists of those now in receipt of poor relief. Registers should be kept by committees of all recipients of assistance from the National Fund, for which purpose the card index system is suggested. Where possible applications for relief should take the form of work for wages, and local authorities will continue to push all works already in progress, and when possible expedite other schemes of public work, and in coöperation with the Distress Committee initiate schemes of work, to be aided by grants made by the Board out of the Parliamentary funds under the Unemployed Workmen Act. Schemes should be prepared in advance by the Distress Committees to be put into execution as soon as any serious lack of employment arises. A circular has been issued by the Board of Education to local education authorities respecting their powers for the feeding of school children conferred by the Act that has just been passed.

ANTITYPHOID INOCULATION IN THE ARMY.

The War Office has issued a communiqué to officers of the Royal Army Medical Corps on the subject of typhoid fever. This states that it can hardly be hoped that improved sanitary precautions will succeed completely in safeguarding the Force from infection, since it will certainly be exposed to three sources of infection, difficult or impossible to control—viz.: (*a*) men in the incubation stage of typhoid who have accompanied or joined the Force; (*b*) unsuspected typhoid carriers; and (*c*) contact with the inhabitants of the country in which typhoid may be present. The preventive value of antityphoid inoculation is now universally recognised and is well known to all who have served in India, but it was not found possible to inoculate the Force on mobilisation. Thus only a small percentage of the men will have been protected, but it should be practicable, by seizing every opportunity, to raise the number of inoculated men very considerably. If a unit is likely to be stationary for a short time advantage might be taken of this, with the consent of the general staff, to inoculate a certain number of men—e.g., a company or half a company, and in this way a whole regiment or other unit might be protected, without any serious interference with its duties. In the same way individual men temporarily disabled by minor ailments, or otherwise available, might be inoculated. It is strongly urged that medical officers lose no opportunity of introducing and carrying through some such system. Antityphoid vaccine has accordingly been sent to the Base Depôt of Medical Stores, and will be issued, as required, on requisition.

WAR AND THE NATIONAL INSURANCE ACT.

Several questions arising out of the war in connexion with the working of the Insurance Act will have to be considered by medical men upon the panels, and a discussion of the subject took place at a recent meeting of the London Panel Committee. The effect of the calling out of the Reserves, both naval and military, and of the embodying of the Territorial Forces will be apparently to remove these men entirely from their position as employed contributors under the Act, and to bring them under the special class of insurance provided for soldiers and sailors by Section 46. They are while serving entitled to receive for their wives maternity benefit only, and an appreciable loss in respect of their contributions will fall upon medical men upon the panels in consequence of their changed status and their removal from their usual abodes. On the other hand, in the areas in which those medical men practise there will be wives and dependents who never have been insured, and some, perhaps many, of these will have to struggle for existence in severely straitened circumstances. At a future date there will probably be a return of persons formerly employed contributors, some to their former status, others in a condition of incapacity arising out of their military service. A large number of medical men, chiefly through the embodiment of the Territorial Forces, will have left their practices at great personal loss to themselves.

At a meeting of the local medical profession on August 4th in Southampton it was unanimously resolved to safeguard the interests of those of their colleagues who are called to leave their practices in the service of their country, and also to undertake any medical duties for the sole benefit of the absentees, and a committee was appointed to facilitate the carrying out of this resolution. This excellent lead is being followed widely.

On August 7th a special meeting of the London Panel Committee was held when practitioners on the panel were asked to express their willingness to undertake free of charge the medical treatment of necessitous dependents of Reservists called to the war and insured persons who had become unemployed because of the war; also to make themselves responsible for the treatment of persons on the lists of practitioners called to service who had been unable to make suitable arrangements. A letter was received from the Pharmaceutical Committee calling attention to the scarcity of certain drugs in consequence of the war, and it was decided to ask practitioners to regulate their prescribing as far as possible in order to husband supplies, which the Pharmaceutical Committee said were none too ample.

H.M. the Queen has become President of a Committee of Ladies of Justice, Ladies of Grace, and Honorary Associates of the Order of the Hospital of St. John of Jerusalem in England to provide hospital, medical, and other comforts for the sick and wounded. Full particulars can be obtained from St. John's Gate, Clerkenwell.

CRYSTAL PALACE AS A HOSPITAL.—The purchase of the Crystal Palace was completed on August 10th, when a cheque for £230,000 was paid to the Earl of Plymouth. The palace and park are now vested in a board of trustees for the use of the people. At the first meeting of the trustees held at the Guildhall Sir David Burnett, who was elected chairman, stated that he had offered the palace and park to the War Office for use as a temporary hospital. His action was heartily approved by the trustees.

THE Alexandra Palace is being converted into a hospital.

THE Great Northern Central Hospital, Holloway, has placed at the disposal of the Government 100 beds for the reception of soldiers and sailors wounded or invalided from active service during the war. Until such beds are needed the usual work of the hospital continues, and the authorities have made full provision for the treatment of all accidents or urgent cases among the poor of North London in the event of the beds being required by the Government.

CARAVANS FOR NURSES IN WAR.—It is commonly known that in previous wars the nursing staff have at times suffered severely from the lack of regular repose and adequate sustenance, none the less severely because they have for the most part accepted the deprivation with heroic loyalty and without murmuring. Mr. J. Harris Stone, honorary secretary-general of the Caravan Club of Great Britain and Ireland, in a letter received by us last week too late for publication, calls attention to the fact that caravans could be used to provide excellent and suitable headquarters accommodation for nurses following the ambulances, both for resting and feeding, complete as they usually are with arrangements for adequate cooking and with comfortable berths for two, and sometimes more, persons. Mr. Stone, therefore, makes a public appeal, not only to members of the Caravan Club, but to all other patriotic owners of caravans, to register their vans with the Club, 108, Long Acre, W.C., giving a description of the van and stating especially its sleeping accommodation, mode of locomotion (one-horse, two-horse, or motor), and cooking facilities, so that this register may be placed at the disposal of the War Office. He has already on the register a considerable number of available caravans, and the scheme has been received with approval by many members of the services. The meet of the Caravan Club that was to have taken place at Mablethorpe, on the Lincolnshire coast, from August 15th to 24th, has had to be cancelled, owing to the necessary restrictions placed on the coast by the military authorities, though we understand efforts are being made to transfer the meet informally to a suitable place a few miles farther inland. The idea of utilising these vehicles to minimise the exacting strain on the nurses during war time is a commendable one, and its realisation would tend greatly to enhance the efficiency of the nursing staff should the fortune of war unhappily demand active service from them on our own shores.

THE SUPPLY OF LOCUM TENENTS.—Mr. Percival Turner writes:—"As usual at this time of year the demand for locum tenens is in excess of the supply, and consequently in some cases demands are being made for fees which many whose practices are small cannot possibly pay. Now we are at war many retired army and navy men who have taken up general practice and others who have duties in connexion with Territorial work have to leave their practices at short notice in order to serve their King and country, and their practices must suffer unless they can get reliable help at reasonable prices. May I therefore appeal with your permission to the patriotism and loyalty of all medical men willing to accept temporary work during war time to be satisfied with as low a fee as possible consistent with the duties required of them? Constant employment can be guaranteed at the rate of 4 to 6 guineas a week."

THE ENGLISH CONJOINT BOARD.—The Examining Board in England by the Royal College of Physicians of London and the Royal College of Surgeons of England give notice that a special Final Examination in Medicine, Surgery, and Midwifery for the Diplomas of L.R.C.P. and M.R.C.S. will be held commencing on Tuesday, Sept. 8th next. Applications from intending candidates should be sent to the secretary, Mr. Frederic G. Hallett, Examination Hall, Queen-square, London, W.C., by August 27th.

THE DUBLIN PROFESSION AND THE WAR.—Our Dublin Correspondent writes:—In Dublin, as in other cities, the medical profession is beginning to feel the pressure of war. Hospitals are already being denuded of house surgeons, dressers, and nurses. Nearly all the younger

qualified men have volunteered and been accepted. With them many senior students have gone. The sisters in a number of the hospitals were on the nursing reserve and have been called up for duty. The gaps thus left cannot be filled, but the public and the medical staffs of the hospitals will meet the position cheerfully.

Dublin University has advertised that a special final examination will be held towards the end of August to give senior students a chance of putting their professional services at the disposal of the country, and the Royal College of Surgeons in Ireland and the Apothecaries' Hall, Dublin, are following the same course. Those of the profession whom age, infirmity, or family responsibility prevents from offering their services in the field, are none the less eager to do what they can to serve their country at home. A medical corps is being organised in connexion with the Irish Volunteers, on whose shoulders the defence of Ireland will probably rest. First-aid and nursing classes are being formed without loss of time, and many medical men are giving their services in the instruction of such classes. The organisation of classes has been undertaken by the Department of Agriculture and Technical Instruction, and a small Government grant will be given where the requirements of the department are fulfilled.

WAR MAPS.—We have received from Messrs. Edward Stanford, Limited, Long Acre, London, W.C., copies of three maps which our readers will find interesting and useful in following the progress of the war. Map No. 1 is of Central and Eastern Europe, showing in colours the international frontiers; Map 2 shows Holland and Belgium; Map 3 shows France, with parts of the adjoining countries. These maps are excellently reproduced in colour with legible lettering, and are on a large enough scale to show all places of military importance.

PATRIOTIC FIRMS.—Messrs. Siemens Brothers and Co., Limited, the well-known electrical engineers of Woolwich, have decided to grant their men who have been called upon for service as Territorials or Reservists full weekly wages or time-rate wages, if married, and half wages if single, until further notice.—Messrs. Bovril, Limited, are continuing the payment of full wages to the relatives and dependents of all men in their employment, married or single, who are called up as Reservists or Territorials.

AMYL NITRIS IN EMERGENCY.—Attention may aptly be drawn to Martindale's capsules of amyl nitrite (W. H. Martindale, 10, New Cavendish-street, London, W.). The valuable properties of amyl nitrite in arresting hæmorrhage or overcoming shock are well known. The firm prepares emergency glass capsules containing 1 to 10 minims, wrapped in cotton-wool. The capsule is readily broken by pressure and the wool, soaked with amyl nitrite, is ready for inhalation. Hæmorrhage from bullet wounds can be controlled in this way, as has been pointed out in our columns, while the administration of this powerful vaso-dilator much relieves shock.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, LONDON.—The committee of management of this hospital have arranged to admit the wives of soldiers and sailors on active service without a subscriber's letter of recommendation; or the patients may, if they prefer it, be attended by the hospital midwives in their own homes, provided they live within the hospital out-patient districts.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns with populations exceeding 50,000 persons at the last Census 9464 births and 4192 deaths were registered during the week ended Saturday, August 1st. The annual rate of mortality in these towns, which had been 11·5, 11·6, and 11·3 per 1000 of their aggregate population estimated at 18,120,059 persons in the middle of this year, rose to 12·1 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 11·6, against 11·3 per 1000 in London during the same period. Among the several towns the death-rate during the week ranged from 3·4 in Exeter, 4·4 in Wimbledon and in Southport, 4·9 in Merthyr Tydfil, 5·0 in Walthamstow, and 6·6 in Ealing and in Coventry, to 17·3 in Middlesbrough, 17·4 in Barnsley, 18·5 in Aberdare, 18·6 in Birkenhead, and 19·0 in Huddersfield.

The 4192 deaths from all causes were 264 in excess of the number in the previous week, and included 549 which were referred to the principal epidemic diseases, against numbers rising from 394 to 478 in the three preceding weeks. Of these 549 deaths, 302 resulted from infantile diarrhœal diseases, 104 from measles, 71 from whooping-cough, 43 from diphtheria, 18 from scarlet fever, and 11 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·6, or 0·2 per 1000 more than in the previous week. The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 112, 151, and 209 in the three preceding weeks, further rose to 302, and included 67 in London, 31 in Sheffield, 19 in Liverpool, 15 in Hull, 14 in Birmingham, 13 in Leeds, 12 in Birkenhead, and 8 in Manchester. The deaths referred to measles, which had been 139, 110, and 98 in the three preceding weeks, rose to 104, of which 35 occurred in London, 20 in Liverpool, 9 in Leeds, 6 in Manchester, 5 in Oldham, 5 in Sheffield, and 4 in Birmingham. The fatal cases of whooping-cough, which had been 77, 73, and 83 in the three preceding weeks, declined to 71, and included 14 in London, 9 in Manchester, 5 in Cardiff, 4 in Leeds, and 3 in Liverpool and in Huddersfield. The deaths attributed to diphtheria, which had been 30, 34, and 46 in the three preceding weeks, fell to 43, of which 8 were recorded in London, 5 in Birmingham, and 2 each in Willesden, Stoke-on-Trent, Nottingham, Birkenhead, Sheffield, and Middlesbrough. The deaths referred to scarlet fever, which had been 22, 26, and 28 in the three preceding weeks, declined to 18, and included 7 in London, 5 in Liverpool, and 2 in Manchester. The fatal cases of enteric fever, which had 13, 12, and 14 in the three preceding weeks, fell to 11, of which 3 were registered in Portsmouth.

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had steadily increased from 2862 to 3135 in the eleven preceding weeks, had further risen to 3154 on August 1st; 405 new cases were admitted during the week, against 414, 430, and 414 in the three preceding weeks. These hospitals also contained on August 1st 1048 cases of diphtheria, 162 of whooping-cough, 37 of enteric fever, and 26 of measles, but not one of small-pox. The 1049 deaths from all causes in London were 127 in excess of the number in the previous week, and were equal to an annual death-rate of 12·1 per 1000. The deaths referred to diseases of the respiratory system, which had been 111, 128, and 86 in the three preceding weeks, rose to 113 in the week under notice, and were 6 in excess of the number in the corresponding week of last year.

Of the 4192 deaths from all causes in the 97 towns, 164 resulted from various forms of violence and 335 were the subject of coroners' inquests, while 1312 occurred in public institutions. The causes of 39, or 0·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, and in 84 other smaller towns. Of the 39 uncertified causes, 12 were registered in Birmingham, 6 in Liverpool, 5 in Stoke-on-Trent, 3 in Sheffield, 3 in Gateshead, 2 in Reading, and 2 in Barrow.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns with an aggregate population estimated at 2,293,200 persons at the middle of this year, 1167 births and 569 deaths were registered during the week ended Saturday, August 1st. The annual rate of mortality in these towns, which had been 13·6, 12·7, and 13·5 per 1000 in the three preceding weeks, fell to 12·9 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 13·2, against 11·6 per 1000 in the 97 large English towns. Among the several towns the death-rate during the week ranged from 5·9 in Kilmarnock, 7·0 in Clydebank, and 7·9 in Paisley, to 17·8 in Dundee, 21·5 in Perth, and 21·8 in Coatbridge.

The 569 deaths from all causes were 23 fewer than the number in the previous week, and included 49 which were referred to the principal epidemic diseases, against 58 and 50 in the two preceding weeks. Of these 49 deaths, 31 resulted from infantile diarrhœal diseases, 7 from whooping-cough, 5 from measles, 3 from diphtheria, 2 from scarlet fever, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·1, against 1·6 per 1000 in the 97 large English towns. The deaths of infants (under 2 years)

attributed to diarrhœa and enteritis, which had been 10, 18, and 20 in the three preceding weeks, further rose to 31, of which number 15 were registered in Glasgow, 6 in Dundee, 3 in Edinburgh, and 2 in Hamilton. The deaths referred to whooping-cough, which had been 13, 15, and 9 in the three preceding weeks, further declined to 7, and included 5 in Glasgow. The fatal cases of measles, which had been 10, 12, and 8 in the three preceding weeks, further fell to 5, of which 3 occurred in Glasgow. The 3 deaths attributed to diphtheria were equal to the average in the three preceding weeks, but showed no excess in any of the towns. The 2 deaths from scarlet fever were recorded in Motherwell and Kilmarnock respectively, and the fatal case of enteric fever in Edinburgh.

The deaths referred to diseases of the respiratory system, which had been 61, 51, and 70 in the three preceding weeks, declined to 61 in the week under notice; and 23 deaths were attributed to different forms of violence, against 21 and 27 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,205,280 persons at the middle of this year, 598 births and 363 deaths were registered during the week ended Saturday, August 1st. The annual rate of mortality in these towns, which had been 15·9, 16·1, and 14·5 per 1000 in the three preceding weeks, rose to 15·7 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 15·6 per 1000; in the 97 large English towns the corresponding rate did not exceed 11·6, while in the 16 Scotch towns it was equal to 13·2 per 1000. The annual death-rate during the week was equal to 17·3 in Dublin (against 12·1 in London and 11·9 in Glasgow), 15·0 in Belfast, 15·6 in Cork, 17·8 in Londonderry, 14·9 in Limerick, and 11·4 in Waterford, while in the 21 smaller towns the mean death-rate did not exceed 14·2 per 1000.

The 363 deaths from all causes were 28 in excess of the number in the previous week, and included 52 which were referred to the principal epidemic diseases, against 43 and 38 in the two preceding weeks. Of these 52 deaths, 21 resulted from infantile diarrhœal diseases, 11 from measles, 9 from whooping-cough, 4 from scarlet fever, 4 from diphtheria, and 3 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 2·2, against 1·6 and 1·1 per 1000 in the English and Scotch towns respectively. The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 13, 14, and 21 in the three preceding weeks, were again 21 in the week under review, of which 9 were registered in Dublin and 9 in Belfast. The deaths referred to measles, which had been 10, 14, and 8 in the three preceding weeks, rose to 11, and included 6 in Belfast and 3 in Sligo. The fatal cases of whooping-cough, which had been 5, 6, and 4 in the three preceding weeks, rose to 9, and comprised 7 in Belfast and 2 in Cork. The 4 deaths attributed to scarlet fever, of which 2 were recorded in Belfast, were equal to the average in the three preceding weeks. The 4 deaths referred to diphtheria occurred in Cork and were slightly in excess of the average in recent weeks. Of the 3 fatal cases of enteric fever, 2 were registered in Dublin and 1 in Belfast. In addition to the deaths from these diseases, a fatal case of typhus was recorded in Belfast.

The deaths referred to diseases of the respiratory system, which had been 53, 41, and 34 in the three preceding weeks, rose to 42 in the week under notice. Of the 363 deaths from all causes, 130, or 36 per cent., occurred in public institutions and 4 resulted from various forms of violence. The causes of 15, or 4·1 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes did not exceed 0·9 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeons: J. J. Walsh to the *Drake*; E. D. J.O'Malley to the *Europa*; and E. H. Hodnet de Courtmacsherry to the *Euryalus*, all on becoming parent ship; E. J. Finch to the Chatham Division, Royal Marines, for Royal Marine Battalion; and E. A. Shaw (retired) to Chatham Dockyard. Staff-Surgeons: A. R. Thomas and T. W. Myles, both to the *Pembroke*, additional, for disposal; J. A. Thompson to the *Goliath*, on becoming parent ship at Devonport; C. E. C. Stanford to the Eastney Division, Royal Marine Artillery, for Royal Marine Battalion; and E. B. Kenny to the *Victory*, for Royal Naval Barracks. Surgeon: J. H. Wright to the *Vivid*, for Royal Naval Barracks. Temporary Surgeons: R. W. Brander, D. P. Brown, A. M. Russell, R. A. Barlow, D. K. Adams, J. C. Walker, W. Meikle, and S. Robertson have been attached to the *Pembroke* for disposal.

In accordance with the provisions of His late Majesty's Order in Council of May 13th, 1901, the undermentioned, formerly a Staff-Surgeon in His Majesty's Fleet, has been placed on the Emergency List: George Harley Ross (dated August 10th, 1914).

ARMY MEDICAL SERVICE.

Colonel John C. Culling, on completion of four years' service in his rank, is placed on the half-pay list (dated August 8th, 1914).

Lieutenant-Colonel William T. Swan, from the Royal Army Medical Corps, to be Colonel, vice J. C. Culling (dated August 8th, 1914).

ROYAL ARMY MEDICAL CORPS.

Major Joseph F. M. Kelly to be Lieutenant-Colonel (dated August 8th, 1914).

Captain Robert J. B. Buchanan is placed temporarily on the half-pay list on account of ill-health (dated August 8th, 1914).

The undermentioned Lieutenants are confirmed in their rank: George E. Dyas, Percival D. Warburton, Allan Watson, Norman V. Lothian, John G. Gill, David W. Rintoul, Sidney M. Hattersley, John W. C. Stubbs, Arthur J. A. Menzies, John F. G. Gwynne, and Thomas F. P. Breen.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Commands and Staff.—Lieutenant-Colonel Laurence J. Blandford, from the 2nd Northumbrian Field Ambulance, Royal Army Medical Corps, to be Divisional Sanitary Officer, Northumbrian Division, Royal Army Medical Corps, vice Major Thomas E. Hill, who resigns his commission (dated August 8th, 1914).

Attached to Units other than Medical Units.—Reginald Cavan Neil to be Lieutenant (dated August 6th, 1914).

For attachment to Units other than Medical Units.—Walter Rowley Bristow to be Lieutenant (dated June 28th, 1914).

DEATHS IN THE SERVICES.

Surgeon-General Sir Anthony Dickson Home, K.C.B., V.C. He received his first commission in the army in 1848, became surgeon-general in 1880, and retired on half pay in 1886. He served in the Eastern campaign of 1854–55, in the Indian Mutiny, where he won the Victoria Cross for conspicuous service, in China in 1860, in New Zealand in 1863–65, and in the Ashantee war of 1873–74, when he was principal medical officer. He was also principal medical officer in Cyprus from 1878–79 and to the Forces in India from 1881 to 1885.

Lieutenant-Colonel S. E. Duncan, R.A.M.C. (retired), at Barrow, on August 7th, the result of an accident. Lieutenant-Colonel Duncan, who was the chief of the medical staff with the troops at Barrow, reached the rank of Lieutenant-Colonel in 1905 and retired in 1910. Although not liable to be recalled for service he had patriotically volunteered, and his untoward death has caused profound regret. He served in the South African war, 1900–02, and took part in the operations in the Orange Free State, including the actions at Houtnek (Thoba Mtn.), Vet river, and Zand river. In the Transvaal he took part in the actions near Johannesburg, Pretoria, and Diamond Hill, and in the Orange River Colony, in the Transvaal, west of Pretoria, and during the operations in Cape Colony, south of Orange River (Queen's medal with clasps, and King's medal with clasps).

Surgeon-General William Maxwell Craig, C.B., of the Royal Naval Hospital, Haslar. He had served on the West Coast of Africa, in the Channel Fleet, and at China and Australian stations. He was principal medical officer of the hospital ship *Maine* in 1901–03, and was in charge of the Royal Naval Hospital at Simon's Town from 1903 till 1906.

INDIAN MEDICAL SERVICE EXAMINATION.

In regard to the recent competition for commissions in His Majesty's Indian Medical Service, it has been decided to nominate the following two candidates who came next in order of merit as Lieutenants on probation:—

	Marks
Charles de Carteret Martin, M.B., Ch.B. Edin.	2696
Joseph Henry Smith, M.B., Ch.B. Edin.	2687

The result of the examination was published in our issue of August 8th, p. 414.

UNIVERSITY OF ABERDEEN.—The King has been pleased, on the recommendation of the Secretary for Scotland, to approve the appointment of Dr. Theodore Shennan, pathologist to the Royal Infirmary of Edinburgh, to be Regius professor of pathology (Sir Erasmus Wilson chair) in the University of Aberdeen, in the place of the late Professor George Dean.

Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

BRISTOL AND WESTERN COUNTIES.

Bristol General Hospital.

ON July 27th the new buildings at the Bristol General Hospital were formally opened by Mr. George A. Wills, the president of the institution. The actual opening ceremony was preceded by a brief dedicatory service conducted by the Archdeacon of Bristol in a marquee on the "deck," a raised area of asphalte used for patients' exercise. Addresses were also given by Mr. Wills, by Mr. Herbert M. Baker, the chairman of the committee, and by Dr. J. Michell Clarke, who is senior physician to the hospital. At the close of these addresses the Lord Mayor moved a vote of thanks to the hospital officials for their beneficence to the city in thus adding to the extent and efficiency of their institution, and some explanatory remarks were added by Mr. G. H. Oatley, of Messrs. Oatley and Lawrence, the architects. The money that has made the extensions of the hospital possible was collected as the result of a remarkably successful appeal, by which over £20,000 were realised in a few days, in addition to a sum of £10,000 left for the foundation of the maternity department by the late Mrs. Proctor Baker. The remainder of the total cost—£45,000—has also been collected, so that the new buildings are free of debt. At the opening ceremony it was announced that a friend of the institution had provided £2000 to pay for the furnishing. At the time when these new buildings were opened the European war cloud was scarcely perceptible, to the general public at all events. It is therefore all the more a matter for congratulation that it was possible to get them opened free of debt, as it is not likely that subscriptions will flow quite as freely after the war is over. Further, the enlargement of the hospital comes very opportunely just at this moment, for the Royal Infirmary, or at least a part of it, is to be used for the Second Southern General Hospital of the Territorial Force. Outside the General Hospital and the Royal Infirmary there is no large general hospital in Bristol, so that the former will not only have to receive some of the patients that cannot be sent home directly from the latter, but it will also have to undertake practically all the hospital treatment of the adult population of Bristol. Happily the matter has been taken thoroughly in hand, and room will be found for the patients who need it. This base hospital with 500 beds is to be taken in hand by the Bristol branch of the Red Cross Society. The premises thus will consist of the Royal Infirmary, together with its nurses' home. The corps which will take charge of this hospital will be commanded by Colonel J. Paul Bush, C.M.G., who did hospital work in the South African war. The arrangements for transferring patients to other institutions have been carried out with commendable promptitude by the infirmary authorities, and there will be no difficulty in undertaking the military work at any time when the order comes. A number of the members of the hospital staffs have left Bristol to serve with the Territorial army and with the Volunteer Naval Reserve, and many other practitioners have gone also. Arrangements are being made for the carrying on of their practices till the war is over. Nurses have gone away with the Territorial forces, and the exodus of residents from the hospitals has been quite remarkable. It is said that almost all the University students have volunteered for service in one capacity or another, apart of course from those who were already attached to the Territorial army.

Bristol Orthopædic Hospital.

At this hospital an open-air balcony has been opened, at a cost of £200, for the treatment of children suffering from surgical tuberculosis. In area this provides 30 feet by 10 feet for sleeping accommodation, and it is protected by blinds for use in bad weather.

School Inspection in Cornwall.

The medical officer of health of the county of Cornwall, Dr. R. Burnet, in his annual report on the medical inspection of school children, which has been recently issued, states that during 1913 12,271 children had been examined; of these, 1235, or 10·06 per cent., suffered from bad eyesight. In alluding to malnutrition in children, Dr. Burnet remarks that there is only a small number of really necessitous children in Cornwall, most of the cases of malnutrition arising mainly through ignorance of the best methods of preparing and administering food, and adds: "The proper feeding of the child is primarily the function of the home, and the responsibility is certainly the parents."

Budleigh Salterton Cottage Hospital, Devon.

An operating-room, fitted up to modern requirements, has been added to the Budleigh Salterton Cottage Hospital. The entire cost has been defrayed by Mr. Bickerton-Williams as a memorial to his late wife.

A Sewerage Scheme for the Axminster Rural District.

The Local Government Board has sanctioned the loan for £11,000 for the purpose of providing a sewerage scheme for the Axminster rural district.

Exmouth Cottage Hospital.

At the annual meeting of subscribers to the Exmouth Cottage Hospital Mr. W. Davis presented £1000 to be used as an endowment fund for the institution.

August 11th.

CANADA.

Dominion Medical Council.

THE second annual meeting of the Medical Council of the Dominion of Canada was held in Ottawa the latter part of June. Sir Thomas Roddick was elected honorary president, and Dr. R. S. Thornton, Deloraine, Manitoba, president. Dr. Robert W. Powell, Ottawa, was re-elected registrar. The examinations of the council were ordered to be held in October at Montreal and next spring in Winnipeg.

Sir Thomas George Roddick.

It was with feelings of the utmost satisfaction that the Canadian medical profession heard that the name of Dr. T. G. Roddick, of Montreal, was included in His Majesty's list of birthday honours. There is no more popular medical man in Canada. For over 20 years he worked for the cause of Dominion registration. He is a past-president of

the British Medical Association, the Canadian Medical Association, and an ex-dean of the Medical Faculty of McGill University, besides having for many years held the chair of surgery therein.

Ontario Medical Council.

At the annual meeting of the governing body of the Ontario College of Physicians and Surgeons, held in Toronto in July, it was unanimously decided to seek an amendment to the Ontario Medical Act, to control quackery by defining the practice of medicine in Ontario. Dr. James McArthur, London, Ontario, was elected President, and Dr. John L. Bray, Toronto, was re-elected Registrar.

Changes and Appointments at McGill University.

Dr. H. S. Birkett has been appointed dean of the Medical Faculty of McGill University, Montreal, in succession to Dr. Francis J. Shepherd. Dr. Howard T. Barnes has resigned from the Physics Department to accept the chair of Physics in the new University of British Columbia. Dr. R. B. Miller has also severed his connexion and has become attached to the physiology department of the Western University at London, Ontario. Dr. G. R. Mines, M.A., has been appointed to the chair of physiology. Dr. Douglas McIntosh becomes professor of physical chemistry and Dr. J. W. Tait assistant professor of psychology; Dr. L. J. Rhea, associate professor of pathology; Dr. C. K. Russel, lecturer in neurology; Dr. A. Freedman, assistant in anatomy; Dr. Maude E. Abbott, lecturer in pathology; Dr. H. B. Cushing and Dr. C. A. Peters, lecturers in medicine and clinical medicine; Dr. E. M. von Eberts, lecturer in surgery and clinical surgery; and Dr. H. C. Burgess, lecturer in gynæcology. No student will be allowed to enter study in any department of McGill University hereafter without satisfactory evidence of successful vaccination.

Fee-splitting and the Ontario Medical Association.

The special committee appointed a year ago by the Ontario Medical Association, and consisting of Dr. H. B. Anderson, Dr. F. N. G. Starr, and the general secretary, Dr. F. Arnold Clarkson, has reported to the recent annual meeting at Toronto that such practices are underhand, unfair to the profession, inimical to the recipients, and not in the best interests of the patients; that surgeons should not over-estimate the relative value of the operation, to the detriment of the physician's services; and that in fixing his own fee the surgeon should have due regard to the ability of the patient adequately to remunerate the physician.

Research Work in Toronto University.

Several citizens of Toronto have agreed to contribute sums amounting to $15,000 for five years that the University of Toronto may engage in research work. The University is said to be financially at a low ebb, and the governors have recently approached the treasurer of the Provincial Government for a grant of $1,500,000.

Appointments at Queen's University, Kingston, Ontario.

Dr. G. W. Mylks has been appointed to the professorship of obstetrics and gynæcology at Queen's University, rendered vacant by the retirement from ill-health of Dr. R. W. Garratt. Other appointments are: Dr. A. R. B. Williamson, professor of pædiatrics; Dr. Fotheringham, assistant professor of surgery; Dr. F. D. MacCallum, lecturer in clinical medicine; Dr. S. M. Asseltine, lecturer in pharmacology; and Mr. J. M. Farrell, lecturer in jurisprudence.

Dalhousie University, Halifax, Nova Scotia.

The pathological department of Dalhousie University is now located in its new building. On completion of the new university buildings the medical faculty will occupy the present one. Dr. D. A. Campbell, of Halifax, formerly professor of medicine, has promised to provide $60,000 to endow a chair of anatomy in memory of his son, the late Dr. George Campbell.

Toronto, July 24th.

AUSTRALIA.

Medical Inspection of School Children.

THE report of the Victoria Department of Education for 1912–13 contains a note from the medical officers, of which there are three. It concludes with the following statements, which represent the result of three and a half years' work—viz., about 35,000 examinations in a population of about 22,000 children: *a.* Defects in school children are very common; 1 in 9 has defective vision; 1 in 9, defects of hearing; 1 in 4, defects of the nose and throat; dental defects are almost universal. *b.* Retardation is more often due to physical defects than to any other single factor or combination of factors. *c.* The only effective agency for their detection is the school medical officer. Definite tests in children for these defects are necessary and need expert control. The defects, however gross, are but rarely known to either parent, child, or teacher, except in their results. *d.* The remedial action must be left largely to the parent, but would best be organised, stimulated, and controlled by the educational authority. This is particularly desirable in the case of dental and eye defects.

Public Health in Victoria.

In the triennial report of the Victoria Health Department, Mr. E. Robertson, the chief medical officer, reviews the statistics of notifiable diseases. Diphtheria has been increasingly prevalent. In 1913 the cases numbered 5367; in 1912, 5289. This is more than double the number in 1910. The mortality rate for 1913 was 4·5 per cent., and the average for the past five years 4·8 per cent. The case mortality rate has steadily fallen, and as the only new factor introduced into treatment is antitoxin, the remarkable results must be ascribed to the use of that substance. Investigations covering seven years show that with closed schools the decrease for diphtheria was 62 per cent. and for scarlet fever 60 per cent. It appears, therefore, that the congregation of children really tends to the spread of infection. Pulmonary tuberculosis is notifiable throughout the State. There are still a few municipalities in which the other notifiable diseases have not been declared, because the Board of Public Health has not been furnished with proof that such diseases have existed within their boundaries. Amendments of the Notification Act are obviously required. The Board should have power to declare any communicable disease notifiable throughout the whole or any part of the State. At present the Board may declare any communicable disease "a dangerous or infectious disease," but the Act gives the Board no discretion in the application of the restrictive provisions, so that sufferers from a chronic disease are subject to the same disabilities as sufferers from an acute

disease. But what is suitable for scarlet fever may be most undesirable for syphilis. Therefore, in any amendment of the Act, provision should be made to allow the Board discretionary powers. The report states that of a total of 14,501 tests of blood specimens undertaken at the university laboratory to the end of last year 6177, or 42·6 per cent., were infected with one or other of the venereal diseases.

The Melbourne Medical School.

A scheme has been formulated by Professor R. J. A. Berry to remove the medical school from the University grounds to the Melbourne Hospital. It is claimed that modern teaching demands that every medical school should be practically part of a hospital, and at present students lose time by having to attend lectures at the University, which is about 15 minutes' walk from the hospital. Professor Berry thinks that a suitable site can be found in one corner of the Melbourne Hospital grounds which would accommodate all existing departments and give double the floor space of the present school. The matter is only in the preliminary stages, but there are several difficulties. While the present opinion is in favour of having the school as near as possible to a hospital, there is some doubt as to the suitability of the proposed site, and some question whether it would be available. It is recognised, also, that such a scheme would practically make the Melbourne Hospital the only clinical school, and within the last few years a successful clinical school has been inauguarated at St. Vincent's Hospital. The estimated cost of the scheme is about £150,000, which includes other University buildings.

Health of Sydney.

The estimated population of Sydney and suburbs on Dec. 31st, 1913, was 725,400, an increase of over 30,000. The marriage-rate was the highest but one since 1886. The birth-rate was 28·92 per 1000, which is 7 per cent. above the average of the last five years. Illegitimate births were 7·41 per cent. of total births. The death-rate was 11·18 per 1000, which is 5 per cent. above the average of the last five years. Of 7938 deaths, 2066 were of children under five years of age.

Professor T. P. Anderson Stuart.

The list of the King's birthday honours included the name of Professor Anderson Stuart, who has been for many years the occupant of the chair of physiology in Sydney University. Sir Anderson Stuart is one of the leading figures in all questions of medical politics in New South Wales, and is recognised as a forceful personality. He has done much to advance medical teaching in Sydney, and has the interests of the medical school at heart. It is noteworthy that two medical men who originally came to Sydney as assistants to Professor Stuart were both knighted. They were Sir Alexander McCormick and the late Sir James Graham.

Subsidised Country Doctors.

The Minister of Health in New South Wales proposes that the Government shall guarantee the income of doctors in centres 20 or more miles away from district hospitals. At many such places the population cannot support a doctor, and in such cases the Government will make up a guarantee. This guarantee will be conditional on the doctor having available at his centre two beds for casualty or urgent cases, and a nurse will be provided in every such centre.

July 5th.

Correspondence.

"Audi alteram partem."

ISOLATION OF DIPHTHERIA CASES.

To the Editor of THE LANCET.

SIR,—Can anyone say what the result would be if diphtheritic and scarlet fever cases were not isolated in hospitals or otherwise, and if the prophylactic use of antitoxin serum was not carried out in those exposed to the former infection? Dr. Lovell Drage apparently believes that it is practically futile to isolate in hospitals cases of scarlet fever and diphtheria.

Personally, I am convinced that without isolation we would be severely handicapped in our efforts to curtail epidemics of these diseases. The properties possessed by the germs of these diseases for their preservation and dissemination are so great that isolation alone, or even combined with the existing means of sanitary disinfection, cannot be expected to prevent their development and spread in populous districts.

There is, I think, one source of possible infection not usually recognised, the mother's hair and probably also that of the patient and nurse. It is quite customary for mothers to nurse in their arms their young children when feverish, fretful, and sick in the early stages of these diseases. The child rests its head on its mother's shoulder and necessarily infects her hair. When we remember how favourable a medium the hair is for the growth of bacilli and how rarely or never women in the humbler stations of life wash their heads, and that those of a higher social status only do so once in every three or four weeks, we cannot regard their hair but as a very real source of danger indeed. I have again and again observed several children in one family successively develop one or other of these diseases, in spite of the fact that isolation and disinfection methods have been adopted. Paper has been removed from the walls and bedding, &c., conveyed to the disinfecting chamber supplied by the municipal authorities, and yet fresh infections occur.

In America some years ago it was the fashion to shave domestic pets, especially cats, in order to eliminate the infective dangers connected with the numerous bacilli found amongst their furs. For the same reasons surgeons are clean shaven and wear caps or hoods when operating. No doubt a woman's "glory" becomes an infecting medium when exposed to the contamination of diphtheritic, scarlet fever, and other bacilli. Not for a moment do I suggest that all mothers and nurses should be shorn of their hair as the cats were in America, or as our surgeons are of their Dundreary appendages and moustaches; but at least they might adopt the following precautions when in charge of infective cases: all acquired hair might be dispensed with, whilst their natural growth should be covered in a similar way to that adopted by surgeons or by themselves when bathing. They should also thoroughly wash their heads regularly with lysol and thereby lessen the risk of infecting others, whilst at the same time enjoying one of the most efficient and luxurious hair washers.

I am, Sir, yours faithfully,

Dublin, August 3rd, 1914. SEYMOUR STRITCH.

PSORIASIS REMOVED BY EXFOLIATIVE DERMATITIS.

To the Editor of THE LANCET.

SIR,—An interesting book has yet to be written on the partnerships and antagonisms of diseases, which are both diverse and curious. A.B., aged 23, had had psoriasis since 6 years of age, in patches on the arms, abdomen, thighs, and back. On May 5th an attack of acute exfoliative dermatitis started up, which he attributes to partaking of oysters. It affected his whole cutaneous surface, including the hairy scalp. His face, chest, abdomen, arms, and thighs were a mass of white papery scales overlying a red, thickened cutis. His nails were deeply grooved from the arsenic which had been often administered for his psoriasis. I did not see him until May 25th, when his state was as described above. There was some pyrexia. I put him on milk diet, administered sulphocarbolates internally, and applied an ointment of zinc lanoline and ichthyol 10 per cent. Calomel as an aperient and antiseptic was also given freely, and Dover's powder to procure sleep. Glycerine baths were tried later. He steadily improved. On June 30th he came to see me, and his skin was smooth and clean everywhere and all traces of psoriasis had disappeared.

I am, Sir, yours faithfully,

EDWARD C. B. IBOTSON, M.D. Lond.

August 10th, 1914.

THE WORKING OF THE NATIONAL INSURANCE ACT IN GREAT YARMOUTH.

To the Editor of THE LANCET.

SIR,—As all our minds are engrossed now with more serious matters I do not propose to make any detailed reply to what I consider Dr. Blake's inaccuracies. I think the correspondence that has already appeared will explain quite clearly to the readers of THE LANCET how bitterly the non-panel men have reason to feel aggrieved by the action of their brethren, with whom previously they were so much in accord.

I am, Sir, yours faithfully,

RAYMOND HENRY SHAW.

Great Yarmouth, August 11th, 1914.

IRRADIATION AND PRECOCIOUS REACTIONS.

To the Editor of THE LANCET.

SIR,—Marquès, in the *Archives d'Electricité Médicale* for August, 1912, stated that irradiation in the region of the salivary glands was followed in a very large number of cases by a marked reaction, one of his colleagues putting it at as many as 25 per cent. He attributed this result to the effect produced on the salivary glands themselves, and described the clinical signs as those of acute inflammation, commencing a few hours after a very feeble dose (the exact amount was not stated), and subsiding in about 48 hours. The same reaction recurred on repeating the dose a fortnight later.

I have recently had a similar experience, following a one-half pastille dose administered to the beard area which I should like to bring before your readers. The ordinary signs of acute inflammation began to make their appearance a few hours later; there was no salivation, the salivary glands themselves did not appear to be specially involved, the appearances being more those of a general cellulitis of the irradiated area. The reaction subsided rapidly in about 48 hours, as in the cases described by Marquès. At a later date a second dose of one-half pastille dose, measured above a filter of 0·5 mm. Al, resulted in a recurrence of the reaction, though slightly less severe in nature. The case was one of coccigenic sycosis of a stubborn type. I was led by these comments of Marquès to produce epilation by divided doses, and judging by the extraordinary reaction produced in this case by a half dose it would seem to be a wise precaution to adopt. In the case recorded by Marquès the patient was also a male, and the irradiation had been undertaken for a slight adenitis in the submaxillary region.

I am, Sir, yours faithfully,

FREDK. HARWOOD-HARDMAN.

Eastbourne, August 6th, 1914.

INFANT FEEDING.

To the Editor of THE LANCET.

SIR,—There is an important mass of citizens, the youngest of all, whose food-supply needs careful safeguarding at the present time. The test of a nation's survival is prolonged many years beyond the time at which the fitness of its soldiers and sailors is at stake.

There is need, therefore, that views on infant feeding, seldom very rarely regarded, should now receive special attention, and the occasion would seem to call for authoritative pronouncement which might be resented in a moment of less urgency. And it must be urged that breast feeding, properly carried out, is the only means that can be relied on effectually to safeguard the welfare of infants. Further, breast feeding is perfectly easy of successful accomplishment in nearly 100 per cent. of cases where children are born at or about the full term of gestation. This is a physiological rule which should scarcely need emphasis. But its obvious nature is frequently overlooked by those who cannot lay aside prejudices in favour of one or other of the methods by which it can be replaced, and who fail to regard parturition as merely a step in the reproductive cycle. Lactation may be watched in process of preparation throughout pregnancy. There is no hesitation in regarding it as a sign of great importance in the diagnosis, and its establishment coincides with the birth of the child with punctual precision. Its early cessation is due in the great majority of cases to mismanagement, and is so frequent as to have bred a tendency among members of the public, and even well-educated members, to disregard its supreme importance to infant welfare. The out-patient departments of our children's hospitals are largely concerned with trying to remedy the effects of this faulty performance, and this is no moment to swell the number of attendances.

Fortunately, the correction of the most prevalent errors in the conduct of breast feeding consists in measures which are extremely simple, and which lighten what is considered to be its chief burden. There can be no question that too frequent suckling is the commonest and most invalidating of all mistakes. It is responsible for impoverishment of the quality and quantity of the milk, dissatisfaction in the infant, and physical fatigue in the mother. The lack of any general agreement on the number of feeds in 24 hours which is best suited to the physiology of lactation and the digestive powers of young infants exists chiefly because these two aspects of the problem are seldom considered in conjunction with one another, with the result that commonly both functions are grossly overtaxed.

With due reservation for exceptional cases—and such exceptions are the delicate and subnormal with which this note is not concerned—seven meals in 24 hours is all a new-born baby requires. Given at punctual intervals of three hours during the day-time this number will secure an ample and prolonged secretion of milk, which is further reinforced by a complete cessation for some hours' sleep at night. At the age of six weeks the seven feeds may be safely reduced to six, and later to five and four, which are amply sufficient at five months. Such a routine will secure a perfectly satisfactory period of lactation for at least nine months, the child will thrive, and the woman is submitted to no strain. Lactation, to recapitulate, is a normal physiological function. It is not a peculiar privilege to which some infants are born, but which is unaccountably withheld from others. Nature in her design of mammalian physiology is not the fool she is often accused of being; and in the remarkable elaboration of artificial feeding which this century has witnessed this fact has been somewhat obscured.

Apart from considerations of expense, a wiser way to approach the question is to recognise that lactation presents no great difficulties to an organism capable of all the miraculous steps of pregnancy and parturition. Its apparent failure in many cases is much more likely to be due to flaws in the crude orthodoxy adopted by our profession since the early days when mysticism shrouded every detail of childbirth; orthodoxy associated with peculiar pitfalls when it is remembered that hitherto the profession has been composed of the sex which has had no personal experience of the whole procedure. A régime such as has been suggested is the outcome of wide, if recent, observations, starting with the memorable work of the great French pioneer, Pierre Budin.

I am, Sir, yours faithfully,

August 7th, 1914. M.B.

THE LONDON DIOCESAN CHURCH LADS' BRIGADE AND THE WAR.

To the Editor of THE LANCET.

SIR,—Colonel Everard A. Ford, Commandant of the London Diocesan Church Lads' Brigade, the largest official Cadet Force in London, has sent an offer to the Army Council to provide 1000 cadets over 16 years of age, trained in the use of arms, for the defence of the shores of the country, and for any other duties which may be assigned to them. This Force is now being organised. My object in trespassing on your space is to appeal to gentlemen who can spare time in the evenings to come forward and render assistance in carrying on the work of the Brigade as a whole, to take the places of the many officers who have left London to join their Territorial battalions. It is obvious that the chief value of the Special Force will be as stretcher bearers, hospital orderlies, cyclists, signallers, scouts, and guards over bridges, stores, &c., and offers of assistance in giving instruction in any of these subjects will be of the utmost value, and should be sent direct to me. The Brigade was able to send out a squad of stretcher-bearers and hospital orderlies in the recent Balkan war, and their work was highly appreciated.

I am, Sir, yours faithfully,

A. W. OYLER,
Major, H.Q.S., Honorary Organising Secretary.

The Laurels, Millfield-lane, Highgate, N., August 12th, 1914.

Obituary.

SIR ANTHONY DICKSON HOME, V.C., K.C.B., M.D. ST. AND., M.R.C.S. ENG.,

SURGEON-GENERAL, ARMY MEDICAL SERVICE (RETIRED).

THE death of Sir Anthony Home is announced. He was born on Nov. 30th, 1826, and qualified as a medical man in 1847. He entered the Army Medical Department as assistant surgeon on March 17th, 1848, became surgeon on Feb. 9th, 1855, being stationed at Lucknow, and went through the Indian Mutiny. He became surgeon-major on Sept. 14th, 1866, deputy surgeon-general on Dec. 24th, 1873, and surgeon-general on April 4th, 1880. He received the honour of C.B. on July 5th, 1865, and K.C.B. on March 31st, 1874. It was when he was surgeon in the 90th Foot Regiment in India, on June 18th, 1858, that he won the coveted Victoria Cross for his conspicuous services. He served in China in 1860; in New Zealand from 1863 to 1865, and took part in the Ashantee war in 1873–74, when he was principal medical officer, and in Cyprus in 1878–79, and to the Forces in India from 1881 to 1885. In 1886 he was the principal medical officer of the District Staff of the No. IV. Southern District with headquarters at Portsmouth, under Lieutenant-General Sir G. H. S. Willis, K.C.B. In 1912 he published "Service Memoirs," a long review of which will be found in THE LANCET of July 6th, 1912, p. 27, and which, perhaps, will now well serve as an obituary memoir. A portrait of him was prefixed to that book.

WALTER ACTON, M.R.C.S. ENG., L.S.A.

ONE of the few remaining survivors, if not the last, of the surgeons of the Crimean war has passed away. Walter Acton was born in Ludlow in 1826 and qualified in 1850. He volunteered for service in the Crimea and was staff surgeon to Osmanli Cavalry for two years. From manuscript notes and paragraphs in published works it is evident that he held responsible positions and was well known among his colleagues and the suffering troops. After the termination of the war he practised for a few years at Stilton and afterwards at Newcastle-under-Lyme, retiring in 1887. Since 1893 he has resided at West End, near Southampton.

THE NATIONAL RELIEF FUND.

THERE is one simple answer which can be given to a universal question now being addressed to editors of journals. The question is, What can I do to help? and the answer is, Subscribe to the Prince of Wales's National Relief Fund.

I enclose £ s. d. toward the Prince of Wales's

NATIONAL RELIEF FUND

Name _____

Address _____

_____

This coupon should be filled in, and the envelope, which need not be stamped, addressed to H.R.H. The Prince of Wales, Buckingham Palace, London.

THE NATIONAL INSURANCE ACT.

UNALLOTTED FUNDS AND THE SCOTTISH CLERKS' ASSOCIATION.

AT a meeting of the Glamorgan Insurance Committee, when the question came up for discussion as to the allocation of money in respect of insured persons who had not chosen any medical man on the panel, a letter was read from a body called the Scottish Clerks' Association, urging the committee to refrain from dividing the funds in their hands, which they were apparently prepared to do upon lines recommended by the Panel Committee. The Scottish Clerks' Association said: "You and your committee and the medical profession generally will recognise that a large proportion of the respectable classes in every community prefer to be treated as private rather than as panel patients, and to pay for it, which must be as satisfactory to the doctor as to them. In this way the insured person is paying twice for medical treatment, and the doctors are receiving double remuneration from such patients. My directors feel sure, therefore, that Insurance Committees and doctors alike will refrain from touching these funds until steps are taken to turn them to a purpose which they are sure will be universally approved." Whatever right the "Scottish Clerks' Association" may have to interfere in the deliberations of the Glamorgan Insurance Committee, which referred the matter for further consideration to its medical benefit committee, it is to be hoped that its views will neither be endorsed by the Glamorgan committee nor accepted there or anywhere by the medical profession. Medical men on the panels entered into contracts with the full knowledge of what is obvious to everyone—that a large number of persons, whether of the "respectable classes" referred to by the Scottish Clerks' Association or not, would not choose their medical advisers on the panels until they were ill. Acting upon the principles of insurance, the medical profession took this into consideration in agreeing to work for remuneration which otherwise would be inadequate, but they knew that under the Insurance Act insured persons not making a choice for themselves had to be allotted by Insurance Committees. The failure of the committees to do this, in the stress of setting the machinery of the Act in motion, has caused the accumulation of large sums of money and drawn attention to the whole matter, but if the contentions of the Scottish Clerks' Association are right, and if the funds can justly and legally be diverted from their original object, there can be nothing to prevent the repetition of the conditions to which we have referred above as due to the congestion of work in the early days of the Act. In short, if this be so, any committee having the same object in view, such as the starting of nursing homes, may raise a fund for it by neglecting to carry out what is laid down in principle by Section 15, Subsection 2 (d), of the Insurance Act, 1911, and refusing to allot to medical men on the panels any patients who do not make a selection for themselves.

THE CERTIFICATION QUESTION IN DUBLIN.

The following resolution was passed unanimously at a recent meeting of the Insurance Committee of the County Borough of Dublin:—

That we, the Insurance Committee for the Borough of Dublin, are of the opinion that the Irish Insurance Commissioners should come to some satisfactory arrangement with the Approved Societies and doctors so that insured persons in Dublin may get the benefit of the moneys voted by Parliament for the purpose of the furnishing of sickness certificates free of cost by the establishment of a certifying panel for this district. We earnestly appeal to their patriotism as Irishmen to the members of the medical profession in Dublin to endeavour on their part by mutual agreement with the Irish Commissioners to retain this money, voted specially for certification work in Ireland, and so avoid its being returned from year to year to the British Treasury. That copies of this resolution be sent to the press, the Irish Commissioners, and the local Medical Association.

Medical News.

UNIVERSITY OF LONDON.—At examinations held in July the following candidates were successful:—

FIRST EXAMINATION FOR MEDICAL DEGREES.

Lena Cecilia Adam, London (Royal Free Hospital) School of Medicine for Women; Wilfred Mark Anthony, St. Thomas's Hospital; Norman Dyer Ball, Mill Hill School and University College; Loveday Shackell Banes and Annie Hardy Banks, London (Royal Free Hospital) School of Medicine for Women; Montv Baramov, University College; Lewis Henry Bartram, Trinity College, Cambridge; Henry Eric Beasley, Epsom College; Edward Ardley Beaulah, Middlesex Hospital; Henry Spencer Bell, St. Bartholomew's Hospital; Enid Margaret Mary Bevan, London (Royal Free Hospital) School of Medicine for Women; Jacob Brodetsky, B.Sc., Birkbeck College; John Douglas Major Cardell, Epsom College; Charles Eric Cobb, St. Thomas's Hospital; *Humphrey Noel Felix Cook, University College; Reginald Vincent Cookes, Guy's Hospital; George Ernest Cornaby, Kingswood School; Anthony Beach Cowley, St. Bartholomew's Hospital; Nora Annie Crow, London (Royal Free Hospital) School of Medicine for Women; Guy Pascoe Crowden, University College; David Sidney Davies, University College, Cardiff; Idris Davies, Pontypridd Intermediate School; Mary Day, London (Royal Free Hospital) School of Medicine for Women; Francis Percival de Caux, University College, Auckland; Walter Stewart Dickson, St. Thomas's Hospital; George Wilhelm Robert W. Dreibeller, St. Bartholomew's Hospital; Abraham Eidinow, London Hospital; Sylvia Victoria Elman, London (Royal Free Hospital) School of Medicine for Women; Frederick Augustus Evans, Llangefni County School; Donald Charles Fairbairn, St. Bartholomew's Hospital; Lilian Mabel Fisher, London (Royal Free Hospital) School of Medicine for Women; Gerald William Thomas Hunter Fleming, University College, Durham; Abraham Foner, Swansea Technical College; Wilfrid Frederick Francis, Berkhamsted School; Frank Alfred Gaydon, St. Thomas's Hospital; Eric James Gordon Gibb, St. Paul's School; Alfred Laurence Goff, King's College; Walter Henry Grace, University of Sydney; St. George Bernard Delisle Gray, Guy's Hospital; Gwenvron Mary Griffiths, Bedford College; Arthur Sheldon Hands, Epsom College; Norman Gray Hill, London Hospital; Oscar Stanley Hillman, University College, Nottingham; Joseph Walker Hirst, Epsom College; Albert William Holgate, Alleyn's School and Birkbeck College; Henry Nevill Hornibrook, St. Paul's School; Marshall Jackson, St. Bartholomew's Hospital; Santo Weisberg Jeger, University College, Cardiff; Robert David Jones, University of Liverpool; Vasant Ranaji Khanolkar, University College; Muriel Elsie Landau and Mary Kathleen Forsaith Lander, London (Royal Free Hospital) School of Medicine for Women; Eugène Henri Léon Leclézio, Guy's Hospital; Charles Gordon Lewis, University of Birmingham; Simon Sally Liebermann, St. Thomas's Hospital; Charles Arthur Lindup, Epsom College; Andrew Best McBride, King's College; Ernest Kenneth Macdonald, St. Thomas's Hospital; Donald McDonald-Taylor, University College, Cardiff; †Janet McAllister McGill, London (Royal Free Hospital) School of Medicine for Women; Noel Olliffe Compton Mackenzie, Epsom College; Gerald Joseph Wyld McMichael, University of Birmingham; Vida Sara Maxwell, London (Royal Free Hospital) School of Medicine for Women; Alfred Mitchell, King's College; George Sydney Morgan, London Hospital; Edith Mary Ponsonby Morris, London (Royal Free Hospital) School of Medicine for Women; John Ernest Nicole, King's College; Norah Dorothy O'Flyn, University College, Cardiff; Reginald Ernest Overton, University College; Marguerite Henrietta Pam, London (Royal Free Hospital) School of Medicine for Women; Manek Jamshedji Panthaky, King's College and University Tutorial College; Charles Frederick Parry and Thomas Parry, University College, Cardiff; *Rowland John Perkins, St. Bartholomew's Hospital; Gordon Frank Peters, Guy's Hospital; George Stuart Bain Philip, King's College and Charing Cross Hospital; Frederick Charles Player, Derby Technical College; Leonard Duncan Porteous, St. Bartholomew's Hospital; John Northley Julian Powlesland, University College, Exeter; Dorothy Priestley Priestley, Girton College and University of Leeds; Mary Millicent Prior, London (Royal Free Hospital) School of Medicine for Women; Walter Ernst Karl Adolf Quitmann, University College; Ernest Frank Rabey, Middlesex Hospital; Ronald Seton Ralph, Guy's Hospital; Edward Douglas Thomas Roberts, St. Thomas's Hospital; Harold Shillito Robinson and George Rendle Rolston, London Hospital; Edward Snow Rose, Epsom College; Benjamin Rosenstein, Westminster City School; Douglas James Lionel Routh, University College; Charles Cecil Rowland, London Hospital; Albert Ernest Sawday, Guy's Hospital;

John Reith O'Donnell Scroggie, University College; Solomon Nahum Semitzky, London Hospital; Bryan Buckley Sharp, Epsom College; Sydney Anselm Sharpe, Guy's Hospital; John Holmes Shaw, University College, Otago, and University College; *†Joseph Harold Sheldon, King's College; Arthur Hugh Shelswell, Guy's Hospital; Raghunath Dadoba Shirvalkar, University College; William Henry Simmons and William Skelly, Guy's Hospital; Bertram Leslie Slater, London Hospital; George John Sophianopoulos, St. Bartholomew's Hospital; Frances Minnie Spickett, London (Royal Free Hospital) School of Medicine for Women; Gilbert Patrick Staunton, St. Bartholomew's Hospital; Mary Sylvia Stocks, London (Royal Free Hospital) School of Medicine for Women; Harold Edward Suter, Epsom College; Khiam Soon Tan, University College; Stanley Roy Tattersall, St. Thomas's Hospital; John Alan Tennyson-Smith, Dulwich College; Cyril James Thomas, St. Thomas's Hospital; Howard Metherell Toop, London Hospital; Robert Lawrence Walker, Epsom College; Austin Darley Wall, Oundle School; Hygeia Leigh Josephine Wallace, University College; Arthur Elston Ward, St. Thomas's Hospital; and Robert Walter Warrick and Eric Roland Webb, Guy's Hospital.

* Distinguished in Inorganic Chemistry.
† Distinguished in Biology.

ROYAL DENTAL HOSPITAL OF LONDON.—The next award for the Storer-Bennett Scholarship will be made early in 1915, and theses to be submitted should be in the hands of the Dean by Dec. 31st next.

PRESENTATION TO A MEDICAL PRACTITIONER.—At Braunton, Devon, on July 29th, Mr. Walter Joseph Harper, L.R.C.P. Lond., M.R.C.S. Eng., was presented by the residents with a silver tray as a mark of esteem on the occasion of his retiring from practice. Mrs. Harper was presented with a silver card case.

DURING the period of the war, or at any rate until vessels in the North Sea, over which is borne the bulk of the raw material used in the manufacture of THE LANCET paper, are safe from the attacks of German warships, we shall be compelled to reduce the size of our weekly numbers. We much regret the reduction, but with us, as with most other newspapers in this country, the course is compulsory.

LITERARY INTELLIGENCE.—Messrs. Longmans and Co. announce for early publication the "Year Book of Radiology for 1915," edited by Robert Knox, M.D., and James H. Gardiner, F.C.S. The object of the work is to give an account of the more recent advances in knowledge of radium, X rays, and allied phenomena from the medical and physical points of view.

DONATIONS AND BEQUESTS.—The late Mr. Charles McDevitt, of Glenties, County Donegal, has by his will, in addition to many religious bequests, left £1500 to provide a water-supply from Lough Anna for Glenties, in memory of his brother; and £10,000 to provide permanently four trained nurses—two for Glenties and one each for Fourtown and for the Rosses.

WAR AND THE SUPPLY OF DRUGS.

THE Government in the course of its inquiry into the supply of food and other necessaries of the country has made certain preliminary investigations with regard to the supply of drugs. It is found that there is at present a shortage of certain drugs owing to the holding up of some foreign supplies and the general dislocation of commerce. To one of the most serious of these the President of the Pharmaceutical Society has called attention in a letter, in which he points out that the main source of potassium salts is Germany, and advises that as far as possible sodium salts should be substituted in prescriptions.

We learn that among the drugs of which the British market is at present short, in addition to potassium salts, are salicylates, bromide salts, preparations of mercury, and permanganates. We understand that there is not at present any serious shortage of quinine and other cinchona preparations or of iodine, although the prices of both have been put up. Dr. B. A. Richmond, the secretary of the London Panel Committee, who has made special inquiry, indicates that syrups and preparations such as phenacetin should be added to the above list.

The British Medical Association has received an invitation to a conference to be held at an early date to assist the Government in considering how the medical profession can best coöperate in dealing with the situation. It is hoped that this shortage will be only temporary, and that soon alternative sources of supply will be opened up. Meanwhile practitioners are invited, as far as possible, to replace the preparations mentioned above by others having similar therapeutical effects. It is probable that in an early issue we shall be able to add to this preliminary notice

There seems to be a universal movement in the profession to undertake to attend the necessitous wives and children of men engaged in the naval and military defence of the country.

The profession desires to assist the Local Distress Committees in every way, and as soon as these get to work medical practitioners will be disposed to accept all cases referred by such committees. The question arises how the cost of drugs and accessories for the treatment of such cases can be met; in certain areas arrangements have already been suggested by which this should be done through the machinery of the Distress Committees.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Parliament and the War.

PARLIAMENT adjourned on Monday, August 10th, for a fortnight. All the necessary business of the session and a large number of emergency Acts have been passed through with rapidity. The grants of men and money for the war have been made, and in face of the great crisis all parties responded to the call to relegate matters of domestic controversy to the background for the present. In this way the nation is offering a united front. Amongst the Acts to receive the Royal Assent before Parliament adjourned were the Milk and Dairies Bill, the Milk and Dairies (Scotland) Bill, and the two Housing Acts.

Ministerial Appointment for Dr. C. Addison, M.P.

Dr. CHRISTOPHER ADDISON, M.D., M.P., has been appointed Parliamentary Secretary to the Board of Education. He does not require to seek re-election in his constituency. For some time it has been regarded as likely that he would receive some post in the Ministry in recognition of his strenuous work in connexion with the National Insurance Act.

HOUSE OF COMMONS.

WEDNESDAY, AUGUST 5TH.

Lung Disease in Industrial Occupations.

Mr. STEEL-MAITLAND asked the Home Secretary (1) whether he would endeavour to make arrangements with the Registrar-General for special returns of deaths from phthisis or other forms of lung disease from ganister mines, tin mines, cutlery works, granite quarries, and other occupations where the death-rate appeared excessive, and (2) in view of the recommendations of the Royal Commission on Metalliferous Mines and Quarries, what further steps, if any, he proposed to take to prevent inhalation of dust during drilling and blasting in metalliferous mines (and whether he would lay any draft regulations to that effect upon the table of the House); in quarries in breaking stones by machinery, or dressing and preparing stone the dust of which was dangerous; and in other factories or workshops in which processes were carried on or in which dangerous dust from stone was generated; and (3) what steps he proposed to take with reference to tin mines and ganister mines with a view to carrying out the recommendations of the Royal Commission on Metalliferous Mines and Quarries, to the effect that the State Advisory Council on Tuberculosis should be asked to make further investigations into the effect of the occupations on the health of the miners.—Mr. MCKENNA wrote in reply: The recommendations of the Royal Commission on Metalliferous Mines and Quarries on the subject of phthisis are under consideration with a view to steps being taken to give effect to them so far as can be adequately done under existing powers, but I regret that I cannot at present make any detailed statement. I may say, however, that I have already been in communication with the chairman of the Advisory Council in regard to the question of further investigations, and I have also arranged for Dr. Haldane to undertake an inquiry supplementary to the investigations made by the Royal Commission in regard

to the physiological effect of various stone dusts on the lungs.

THURSDAY, AUGUST 6TH.

Asylum Medical Officers and Military Service.

Mr. KING asked the Home Secretary whether he was aware that a county lunatic asylum with 2000 patients was left with inadequate medical staff owing to medical men being called up for military services; and whether steps were in contemplation for assisting large institutions in similar difficulties.—Mr. MCKENNA: The Board of Control inform me that though they have received no representations on the matter they have already given it careful consideration. They have every confidence that officers not called out will loyally respond to the demand for any extra work laid upon them, and that the interests of the patients will not suffer while temporary measures are being taken to supplement the regular staff.

MONDAY, AUGUST 10TH.

The Certification of Lunatics.

Sir JOHN JARDINE asked the Home Secretary whether his attention had been drawn to any cases where an alleged lunatic, not having been personally seen by a magistrate, had been deprived of his right to the intervention of a judicial authority owing to neglect on the part of a manager of a private institution for lunatics to deliver to the patient under his care the notice of right of appeal required by Section 8 of the Lunacy Act; and what arrangements would be made to prevent such occurrences in future.—Mr. MCKENNA said in reply: One alleged case of this kind has been brought to my notice. Such cases would not in the ordinary course be brought to my notice, as my sanction is not required for a prosecution, or a warning, or other step deemed proper by the Board of Control. A few instances have come to the knowledge of the Board, who are contemplating taking steps for rendering such omissions most unlikely, and for bringing them, should any occur, to the notice of the Board.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London.

Medical Notes for School Teachers. By C. W. Hutt, M.A., M.D. Cantab., D.P.H. Oxford. Price 1*s.* net.

BUFFARINI, A. GUIDI, Cordoba 2080, Buenos Aires.

Cancer Experimental por el Dr. Angel H. Roffo, Encargado del Estudio del Cancer por el Departmento Nacional de Higiene.

CAMBRIDGE UNIVERSITY PRESS, Cambridge.

Flies and Disease: Non-blood-sucking Flies (Cambridge Public Health Series). By G. S. Graham-Smith, M.D., University Lecturer in Hygiene, Cambridge. Second edition. Price 12*s.* 6*d.* net.

CHURCHILL, J. AND A., London.

Medical and Pharmaceutical Latin for Students of Medicine and Pharmacy. By Reginald R. Bennett, B.Sc. Lond., F.I.C. With an Introduction by Henry G. Greenish, F.I.C., F.L.S. Second edition. Price 6*s.* 6*d.* net.

Pharmacopœia of the Hospital for Diseases of the Throat, Nose, and Ear, Golden Square. Edited by Charles A. Parker, F.R.C.S. Edin., and T. Jefferson Faulder, M.B., B.C. Cantab., Surgeons to the Hospital. Seventh edition. Price 2*s.* 6*d.* net.

Operative Surgery: The Head and Neck, the Thorax and the Abdomen. By Edward H. Taylor, M.D., B.S. Dub. Univ., F.R.C.S.I., Professor of Surgery in the University of Dublin. 300 figures from original drawings, many in colours. Price 30*s.* net.

COLIN, ARMAND, 103, Boulevard St. Michel, Paris.

Les Universités Allemandes au XXe siècle. Par le Dr. René Cruchet, Professeur agrégé à l'Université de Bordeaux. Préface de Camille Jullian, Membre de l'Institut. Price Fr.4.

ENGELMANN, WILHELM, Leipzig und Berlin.

Die Unregelmässige Herztätigkeit und ihre Klinische Bedeutung. Von Dr. K. F. Wenckebach (Strassburg I. Els.). Price M.13.

KIMPTON, HENRY, London.

Practical Pediatrics: a Modern Clinical Guide to the Diseases of Infants and Children for the Family Physician. By James H. McKee, M.D., Professor of Pediatrics, Temple University, and William H. Wells, M.D., Assistant Professor of Obstetrics, Jefferson Medical College. With an Appendix upon Development and its Anomalies. By John Madison Taylor, A.M., M.D., Associate Professor of Non-pharmaceutical Therapeutics, Temple University. Two vols. Price £2 10*s.* net.

Gonorrhœa and its Complications in the Male and Female. By David Watson, M.B., C.M., Surgeon, Glasgow Lock Hospital. Price 15*s.* net.

Surgery: Its Principles and Practice, for Students and Practitioners. By Astley Paston Cooper Ashhurst, A.B., M.D., F.A.C.S., Instructor in Surgery in the University of Pennsylvania. Price 28*s.* net.

LEWIS, H. K., London.

The Child's Diet By J Sadler Curgenven, M.R.C.S., L.R.C P Second edition. Price 2*s.* 6*d.* net.

LIPPINCOTT, J. B., COMPANY, Philadelphia and London.

Abdominal Surgery: Clinical Lectures for Students and Physicians By Thorkild Rovsing (Copenhagen). Edited by Paul Monroe Pilcher, A.M., M.D., Brooklyn, New York. Price 21*s.* net.

LYNWOOD AND CO., LIMITED, 12, Paternoster-row, E.C.

Strike: A Story in Dialogue. By Frederick Watson. Price 1*s.* net.

MEDICAL PUBLISHING COMPANY, LIMITED, 23, Bartholomew Close, E.C.

Operative Treatment of Fractures. By Sir W. Arbuthnot Lane, Bart., M.S., F.R.C.S. Second edition.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ANNETT, H. E., M.B., Ch.B. Vict., has been appointed Medical Officer of Health of Runcorn.

BAZALGETTE, SIDNEY, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Brent Knoll District by the Axbridge (Somerset) Board of Guardians.

CAIRNS, GEORGE DOUGLAS, M.B., Ch.B. Edin., has been appointed Assistant School Medical Officer for Kirkcaldy District.

CAMPBELL, G. M., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon at the Bristol Royal Infirmary.

CREASEY, R., L.R.C.P., M.R.C.S., has been appointed House Physician at the Bristol General Hospital.

EVANS, DOUGLAS GORDON, M.B., B.S. Lond., has been appointed House Surgeon at the Royal Infirmary, Sheffield.

FAYLE, B. J. L., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon at the Bristol General Hospital.

HARRISON, C. C., M.B., B.S. Lond., has been appointed House Surgeon at the Bristol Royal Infirmary.

JOHNSON, R. B., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician at the Bristol General Hospital.

MALAHER, BRUCE, L.R.C P. & S. Irel., has been appointed House Surgeon at the Royal Infirmary, Sheffield.

PARKER, H. G., F.R.C.S. Edin., L.R.C.P. Edin., has been appointed Honorary Aural Surgeon to the Bolton Infirmary and Dispensary.

SHENNAN, THEODORE, M.D. Edin., F.R.C.S. Edin., has been appointed Regius Professor of Pathology in the University of Aberdeen.

SOWERBY, R. S., M.B., B.S. Lond., has been appointed House Physician at the Bristol Royal Infirmary.

TAYLOR, W. E., L.R.C.P. Lond., M.R.C.S., has been appointed Casualty House Surgeon at the Bristol General Hospital.

THOMAS, W. IKES, M.D. Lond., M.R.C.P. Lond., has been appointed Medical Superintendent of the State Institution for Mental Defectives at Moss Side, Liverpool.

THORNLEY, N. G., M.B., Ch.B. Edin., has been appointed Honorary Aural Surgeon to the Bolton Infirmary and Dispensary.

WHITE, H. V., M.D. Manch., has been appointed Honorary Assistant Surgeon to the Manchester Royal Eye Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERGAVENNY, MONMOUTHSHIRE ASYLUM.—Locum Tenens Assistant Medical Officer. Salary 6 guineas per week and all found.

ABERYSTWITH GENERAL HOSPITAL.—House Surgeon and Secretary. Salary £175 per annum, all found.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, residence, and laundry.

AYLESBURY, ROYAL BUCKINGHAMSHIRE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, washing, and lodging.

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £120 per annum, with board and residence.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £150 per annum, with residence, board, and laundry.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

BENENDEN NATIONAL SANATORIUM, Kent.—Assistant Medical Officer. Salary £120 per annum, with board, residence, and laundry.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board and laundry.

BIRMINGHAM UNION.—Fourth Assistant Medical Officer at Dudley-road Infirmary. Also Assistant Medical Officer at Selly Oak Infirmary. Salaries respectively £140 and £160 per annum, with board and residence.

BODMIN, CORNWALL COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £225 per annum, with quarters, board, laundry, and attendance.

BOOTLE COUNTY BOROUGH.—Clinical Tuberculosis Officer and Deputy Medical Officer of Health. Salary £400 per annum.

BOOTLE HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Officer, unmarried. Salary £150 per annum, with board, washing, and apartments.

BRADFORD CITY EDUCATION COMMITTEE.—Chief School Dentist. Salary £350 per annum.

BRADFORD ROYAL INFIRMARY.—House Physician, unmarried. Salary £100 per annum, with board, residence, and washing.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-Resident House Surgeon for six months. Salary at rate of £150 per annum.

BRISTOL CITY ASYLUM, Fishponds.—Second Assistant Medical Officer, unmarried. Salary £250 per annum, with apartments, board, washing, and attendance.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Physician and House Surgeon. Salary £100 per annum each, with board, rooms, attendance, and laundry.

BRITISH GUIANA.—Bacteriologist. Salary £350 per annum, with furnished bachelor quarters.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CANCER HOSPITAL, Fulham-road, S.W.—House Surgeon for six months. Salary £70 per annum.

CANNING TOWN WOMEN'S SETTLEMENT HOSPITAL, Balaam-street, Plaistow, E.—Female Senior Resident Medical Officer. Salary £120 per annum, with board and laundry.

CARDIFF CITY MENTAL HOSPITAL, Whitchurch.—Locum Tenens for five weeks. Salary 6 guineas a week.

CARNARVONSHIRE EDUCATION COMMITTEE.—School Dentist. Salary £250 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd-street, St. Pancras, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CITY OF WESTMINSTER UNION INFIRMARY, Colindale-avenue, Hendon, N.W.—Assistant Medical Officer. Salary £160 per annum, with board, residence, and washing.

CROYDON BOROUGH HOSPITAL FOR INFECTIOUS DISEASES.—Assistant Resident Medical Officer. Salary £150 per annum, with board, residence, and laundry.

DERBY, DERBYSHIRE HOSPITAL FOR SICK CHILDREN.—Female Resident Medical Officer. Salary £80 per annum.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried, Salary £150 per annum, with board and laundry.

EGYPT, EGYPTIAN HOSPITALS FOR THE INSANE.—Assistant Medical Officer, unmarried. Salary £E45 per month, with quarters.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Physician and Assistant House Surgeon for six months. Salaries at rate of £200 per annum each, with board, apartments, and washing.

GLAMORGAN COUNTY COUNCIL COMMITTEE FOR THE CARE OF THE MENTALLY DEFECTIVE.—Medical Officer. Salary £300 per annum.

GLASGOW SCHOOL BOARD.—Female Assistant Medical Officer.

HALIFAX ROYAL INFIRMARY.—Second and Third House Surgeons, both unmarried. Salaries £120 and £100 per annum respectively, with residence, board, and washing

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for five months. Salary 25 guineas.

HOSPITAL FOR WOMEN, Soho-square.—Clinical Assistants in Out-patient Department.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £100 per annum, with board and lodging.

INVERNESS, NORTHERN INFIRMARY.—House Surgeon. Salary £100 per annum, with board, &c.

KENSINGTON AND FULHAM GENERAL HOSPITAL, Earl's Court, S.W.—Resident Medical Officer. Salary at rate of £70 per annum, with board and laundry.

LANCASHIRE COUNTY COUNCIL.—Two Junior Assistant Tuberculosis Officers. Salary £300 per annum.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Physician. Salary £85 per annum, with board, residence, and laundry.

LEEDS PUBLIC DISPENSARY.—Two Resident Medical Officers. Salaries £130 per annum, with board, residence, and laundry.

LEICESTER, NORTH EVINGTON POOR-LAW INFIRMARY. — Senior Assistant Medical Officer and Junior Assistant Medical Officer. Salaries £200 and £150 per annum respectively, with apartments, rations, laundry, and attendance.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—Resident Surgical Officer, House Surgeon, and Two House Physicians, all for six months. Salaries respectively £70, £60, and £60, with board, residence, and laundry.

LONDON COUNTY ASYLUM, Colney Hatch, New Southgate, N.—Junior Assistant (Sixth) Medical Officer, unmarried. Salary £200 per annum, with board, apartments, and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Honorary Assistant Physician.

MANCHESTER, HULME DISPENSARY, Dale-street, Stretford-road.—House Surgeon. Salary £180 per annum, with apartments, attendance, coal, and gas.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham Hill-road.—House Surgeon. Salary £120 per annum, with apartments and board.

MANCHESTER, POOR-LAW INSTITUTION, Crumpsall.—Junior Resident Assistant Medical Officer, unmarried. Salary £120 per annum, with rations, apartments, washing, and attendance.

MANCHESTER, PRESTWICH UNION INFIRMARY, Charlestown-road, Blackley.—Assistant Medical Officer. Salary £140 per annum, with apartments, board, &c.

MANCHESTER ROYAL INFIRMARY.—Medical Officer for Out-Patients and Accidents for six months. Salary at rate of £100 per annum, with board and residence. Also Three House Physicians, House Surgeon, and Four Junior House Surgeons, unmarried. Board and residence provided.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Surgeon and Assistant House Surgeon for six months. Salary at rate of £60 and £40 per annum respectively, with board and washing.

NEWCASTLE-UPON-TYNE POOR-LAW INSTITUTION AND INFIRMARY, Westgate-road.—Assistant Resident Medical Officer, unmarried. Salary at rate of £200 per annum, with apartments, rations, and washing.

NEWPORT (MON.), ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary for first six months at rate of £100 per annum, second six months £125, and third six months £150, with board, residence, and laundry.

NORWICH CITY ASYLUM, Hellesdon, near Norwich.—Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, attendance, and laundry.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £180 per annum, with apartments (not board), attendance, light, and fuel.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £120 per annum, with board, residence, and laundry.

PORTSMOUTH WORKHOUSE INFIRMARY, WORKHOUSE, AND CHILDREN'S HOME.—Second Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with apartments, rations, &c.

PRESTON, COUNTY ASYLUM, Whittingham, Lancs.—Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, &c.

PRESTON ROYAL INFIRMARY.—House Physician. Salary £120 per annum, with board, residence, and laundry.

PUTNEY HOSPITAL, Putney Common, S.W.—Resident Medical Officer. Salary £100 per annum, with rooms, board, and laundry.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £110 per annum, with board, lodging, and washing.

ROYAL EDINBURGH ASYLUM, Morningside.—Assistant Physician. Salary £175 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Twenty-five Appointments.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Junior Resident Medical Officer. Salary at rate of £70 per annum, with board and washing. Also Senior Resident Medical Officer. Salary at rate of £90 per annum, with board and washing.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer. Salary at rate of £100 per annum, with board, residence, and laundry.

SALFORD ROYAL HOSPITAL.—Casualty House Surgeon. Salary at rate of £100 per annum, with board and residence.

SALISBURY (GENERAL) INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and lodging. Also Assistant House Surgeon. Salary £75 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior and Junior House Surgeons. Salaries £100 and £80 per annum respectively, with board, residence, &c.

SHEFFIELD, EAST END BRANCH OF THE CHILDREN'S HOSPITAL (OUT-PATIENT DEPARTMENT).—House Surgeon. Salary £120 per annum, with board and residence.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £125 per annum, with board, washing, and attendance. Also House Physician. Salary £125 per annum, with board, apartments, and laundry.

TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, and washing.

WALSALL AND DISTRICT HOSPITAL.—Junior House Surgeon and Anæsthetist. Salary £110 per annum, with board, residence, and laundry.

WALTHAMSTOW EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, attendance, and washing.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House Surgeon and Anæsthetist, unmarried. Salary £100 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Two House Physicians and Three House Surgeons for six months. Board, lodging, and laundry provided.

WEST RIDING OF THE COUNTY OF YORK, STORTHES HALL ASYLUM, Kirkburton, near Huddersfield.—Assistant Medical Officer. Salary £230 per annum, with rooms, board, attendance, and washing.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with residence, board, and laundry.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

WINDSOR, KING EDWARD VII. HOSPITAL.—House Surgeon. Salary £100 per annum, with residence, board, laundry, and attendance.

WREXHAM INFIRMARY.—Resident House Surgeon. Salary £120 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Leiston, in the county of Suffolk.

Births, Marriages, and Deaths.

BIRTHS.

CLAPHAM.—On August 8th, at Fourth-avenue, Hove, the wife of Roderic Arthur Clapham, M.A., M.D., of a daughter.

MOLE.—On August 10th, at 19, Mortimer-road, Clifton, Bristol, the wife of Harold F. Mole, F.R.C.S., of a son.

MARRIAGES.

HILLS—ROBERTSON.—On August 6th, Harold William Hills (Lieutenant, R.A.M.C.S.R.) to Margaret Robertson, daughter of H. R. Robertson.

SAUNDERS—MINTO.—On August 10th, at the Presbyterian Church, Whitley Bay, W. Eric Roper Saunders, M.R.C.S. Eng., L.R.C.P. Lond., to Ruth Ann, fourth daughter of the late Captain Andrew Minto, of Berwick-on-Tweed.

DEATHS.

ACTON.—On August 8th, at The Glen, West End, Hants, Walter Acton, M.R.C.S., L.S.A., suddenly, after a long illness, aged 88.

CLARKE.—On August 7th, at Brighton, Harry Edward Clarke, M.R.C.S., L.R.C.P., of The Avenue, Bedford Park, London, the youngest dearly loved son of the Rev. D. G. Clarke, Rector of Puttenham, aged 37. R.I.P.

LITTLE.—On August 9th, at Dorset-square, N.W., John Fletcher Little, M.B. Cantab., M.R.C.P. Lond., aged 71.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

STUDENTS' NUMBER OF THE LANCET.

INFORMATION intended for the Students' Number of THE LANCET must be sent WITHOUT DELAY, addressed to the Sub-Editor, and marked on the envelope "Students' Number Only."

A SECRET REMEDY FOR SNAKE-BITE.

A CASE of fatal snake-bite is reported in the *Indian Medical Gazette* for July by Major F. Wall, I.M.S., the only unusual feature of which was the patient's reliance upon a secret remedy or antidote. A certain Mr. Fox, quaintly described as "a young, middle-aged European," in sound health, allowed himself to be bitten on the left wrist by a young krait (*bungarus cæruleus*) at about 10 A.M. The snake was about half grown, and it inflicted five punctures. Instantaneous pain came on, and the wounds began to bleed. Within a minute and a half the patient incised four out of the five punctures with a sterilised knife, after which he instilled a fluid antidote of secret composition into each wound; the fifth puncture was overlooked. Mr. Fox was not in the least alarmed, having implicit faith in his remedy. About four hours after the injuries he complained of stomach-ache, which he attributed to his lunch; and half an hour later he admitted having "pins and needles" in his legs. Uncertainty of gait and nausea followed, and later there were actual vomiting and imperfect vision. In spite of the progress of these symptoms the patient remained composed and hopeful, even though he then began to suffer from dyspnœa. At 7 P.M. he was admitted to hospital, still conscious but unable to stand up; and at 8 P.M. he died, ten hours after the intromission of the poison. The clinical course of the symptoms was typical of colubrine poisoning, and was of about average rapidity and intensity. What the secret remedy was which played this unfortunate patient so false does not appear.

MOTHERS' PENSION LAW.

Mr. F. P. Leay, British Consul at Boston, Massachusetts, U.S.A., reports that an Act, locally known by the above name, came into effect in September, 1913. It is intended to provide for suitably aiding mothers with dependent children, and constitutes a new departure in economic legislation as far as that section of the United States is concerned. The purpose of the Act is to enable poor mothers to bring up their children at home whilst they are receiving an education, and is based on the theory that separation of the mother from the child and the relegation of the latter to an institution is inimical to its best interests. The Act provides that all necessitous mothers of children under 14 shall receive such allowance in cash as a board appointed by the State shall consider proper to enable them to bring up and educate their children at home. Any relative legally obliged to contribute shall be compelled to do so. The State is to contribute one-third of the annual expenditure and the municipality the remaining two-thirds.

A CREDITABLE RECORD.

A VALUED correspondent writes:—"Dr. Lewis Reynolds, of High Wycombe, who is the father of four sons, has one of them in the Indian army, a second in the Royal Army Medical Corps, and one in the Field Artillery (now on his way to the front). The eldest of the four, though a member of our profession, has charge, as senior captain, of a large draft of Territorials who are, as likely as not, now being transported—no one knows where. If every medical man were equally liberal in his contribution to the fighting stock of this country England need have no fear when speaking with her enemy in the gate."

LEPROSY IN RUSSIA.

IN his annual report on the district of St. Petersburg, Mr. A. W. Woodhouse, the British Consul, quotes a statement to the effect that fresh cases of leprosy are continually being discovered in different parts of the empire, in 59 provinces of which lepers are registered. The number of leprous patients treated by doctors was 1025 in 1903, 1425 in 1906, 1686 in 1909, and 1621 in 1911. It is estimated that there are now at least 10,000 lepers in Russia. There are 21 leper institutions in the country, of which 17 are supported by voluntary contributions. The State does not provide sufficient accommodation, and therefore it is not compulsory by law to isolate lepers, many of whom are known to be engaged in various occupations amongst healthy communities.

NEURASTHENIA AND WORKMEN'S COMPENSATION.

IN the Manchester county court his honour Judge Mellor had before him an application by the Lancashire and Yorkshire Railway Company for the reduction of compensation being paid to F. T. Ambrose, a workman. Ambrose had had his head injured by a blow from an iron bar, for which he had been detained in the infirmary for two hours, but had only worked since on three occasions in five years. Professor J. W. Smith, who had examined Ambrose as medical referee, had reported that if a certain course were adopted he would probably be well enough to resume his work within three months. The employers were prepared to pay six months' compensation to end the matter. Counsel for the workman argued that the man did not wish to have a lump sum; and that Professor Smith's report said that though free from organic disease Ambrose was suffering from chronic neurasthenia and that his condition was such that he was not fit even for light work. Judge Mellor, after consultation with the medical referee, described the case as "a remarkable example of what might be called 'legal neurasthenia,'" and said that it was evident that the man would go on suffering until the legal aspect was finally dealt with. A reduction of compensation would have no effect, and he did not consider that under the Workmen's Compensation Act he had power to act on his own initiative and put an end to the existing conditions, even if that might be the best thing for the workman. It was a case where compensation should be stopped, but in the absence of an agreement he must make an award for the respondent Ambrose, with costs.

NERVES AND NOISES.

A CORRESPONDENT writes: At the present time it should be the endeavour of everyone to prevent as far as possible scares of any sort. Last week, on the morning after the declaration of war, a loud detonation, said to have been caused by the fusion of an electric cable in London, but more probably a thunderclap, gave rise to the silly suggestion that a German airship had dropped a bomb, and twice recently in a London suburb some excitement has been caused by sounds resembling rifle shots at night time. The fact that soldiers were in the neighbourhood immediately suggested that spies had been shot at, and local gossip confirmed the rumour with specific details. It behoves everyone in these anxious times not to give credence to silly rumours and to do all they can to allay the fears of the nervous.

B. L.—Our correspondent has the choice of the following books:—Gunshot Wounds. By C. G. Spencer, M.B. Lond., F.R.C.S. Eng., Major, R.A.M.C. London: Henry Frowde and Hodder and Stoughton. 1908. Pp. 287. Price 5*s.* net.—Leçons de Chirurgie de Guerre: les Blessures faites par les Balles des Fusils. By J. L. Reverdin, Professeur à la Faculté de Médecine de Genève. Illustrated. Geneva: Georg et Cie. 1910. Pp. 224. Price Fr.7.50.—Modern Bullet Wounds and Modern Treatment, with Special Regard to Long Bones and Joints, Field Appliances and First Aid. Part of the Alexander Essay for 1903. By Major F. Smith, D.S.O., R.A.M.C. London: J. and A. Churchill. Pp. 96. Price 3*s.* net.—Wounds in War, the Mechanism of their Production and their Treatment. By Surgeon-General Colonel W. F. Stevenson, C.B., K.H.S., R.A.M.C. (Retd.) Third edition. London: Longmans, Green, and Co. 1910. Pp. 559. Price 16*s.* net.—Surgical Experiences in South Africa, 1899–1900. By G. H. Makins, C.B., F.R.C.S. London: Smith, Elder, and Co. 1901. Pp. 486. Price 16*s.*, may also be consulted with advantage.

Twenty Years' Subscriber.—1. No treatment can remove the scars, but if they are very bad it may be worth while to do skin grafting. The scars will gradually become less noticeable without any treatment. 2. For the itching a sedative ointment will be useful, such as: Hydrarg. ammon. gr. vi., amyli 2 dr., paraff. moll. ad 1 oz. This should be kept applied to the skin for as long as possible each day.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

The following magazines, journals, &c., have been received:—New Zealand Medical Journal, British Journal of Children's Diseases, Tidsskrift for den Norske Lægeforening, Dominion Medical Monthly, Archives of Roentgen Rays, Practitioner, Pediatrics, American Journal of Tropical Diseases and Preventive Medicine, Pharmaceutical Journal, Post Graduate, American Journal of Roentgenology, Canadian Journal of Medicine and Surgery, Cornell University Medical Bulletin, Archives Générales de Chirurgie, Archives of Pediatrics, American Journal of Medical Sciences, South African Nursing Record, Journal of Obstetrics and Gynæcology of the British Empire, Medical Review of Reviews, Journal of Mental and Nervous Disease.

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. Mr. Gibb: Diseases of the Eye.

TUESDAY.—10 A.M., Dr. Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Souttar: Operations. Dr. Simson: Diseases of Women. Mr. Gibb: Diseases of the Eye.

THURSDAY.—9 A.M., Dr. Bernstein: Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Mr. Gibb: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Eye Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Souttar: Operations.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), London Hospital, Mile End-road, E.

Demonstrations in Clinical Medicine:—

MONDAY.—2.15 P.M., Dr. Wall: Pulmonary Tuberculosis. (Clinical Theatre.)

TUESDAY.—2.15 P.M., Dr. Grünbaum: Diseases of the Blood. (Clinical Theatre.)

WEDNESDAY.—2.15 P.M., Dr. Miller: Abdominal Diseases. (Out-patient Department.)

THURSDAY.—2.15 P.M., Dr. Thompson: Diseases of the Nervous System. (Clinical Theatre.)

FRIDAY.—2.15 P.M., Dr. L. Smith: Common Cardiac Conditions. (Clinical Theatre.)

SATURDAY.—10.15 A.M., Dr. Hutchison): Demonstrations on Selected Cases. (Wards or Clinical Theatre.)

Demonstrations on Selected Surgical Cases and on Cases of Interest in the Wards of the Hospital:—

MONDAY.—2 P.M., Mr. Milne.
TUESDAY.—2 P.M., Mr. Lett.
WEDNESDAY.—2 P.M., Mr. Howard.
THURSDAY.—2 P.M., Mr. Warren.
FRIDAY.—2 P.M., Mr. Walton.

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

ROTUNDA HOSPITAL POST-GRADUATE COURSES, Dublin.

MONDAY.—10 A.M., Obstetrical Lecture: The Complications of Pregnancy: Vesicular Mole and Chorion Epithelioma. 11 A.M., Examination of Patients and Minor Operations.

TUESDAY.—10 A.M., Major Operations.

WEDNESDAY.—10 A.M., Obstetrical Lecture: The Complications of Pregnancy: Hydrorrhœa, Hydramnios. 11 A.M., Examination of Patients and Minor Operations.

THURSDAY.—10 A.M., Major Operations.

FRIDAY.—10 A.M., Gynæcological Lecture: The Anatomy of Uterine Prolapse. 11 A.M., Examination of Patients and Minor Operations.

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1914, which was completed with the issue of June 27th, were given in THE LANCET of July 4th.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1914 are now ready. Bound in cloth, gilt lettered, price 16*s.* carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 12th, 1914.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Aug. 6	29·81	WSW	0·03	119	70	53	57	58	Overcast
,, 7	29·90	W.	...	119	70	55	55	58	Cloudy
,, 8	30·05	S.W.	0·08	72	61	55	57	60	Overcast
,, 9	30·01	S.W.	...	110	70	59	61	65	Cloudy
,, 10	30·12	S.W.	...	97	70	60	62	64	Overcast
,, 11	30·32	W.	...	114	75	55	56	60	Fine
,, 12	30·34	S.E.	...	123	77	58	61	65	Fine

Communications, Letters, &c., have been received from—

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